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CAELI ENARRANT *

ARTHUR STANLEY PEASE
HARVARD UNIVERSITY

EVERY diligent reader of ancient literature has encountered, sooner or later, evidences of belief in teleology, the doctrine of the deliberate adaptation of the phenomena of organic life (and even of those of the inorganic celestial system) to some definite end or purpose, as opposed, on the one hand, to the effects of blind chance, and, on the other, to those of a merely automatic survival of the fittest and the elimination of the unfit. Further, from reflection upon phenomena susceptible of teleological explanation, thinkers, both classical and oriental, alike ancient and modern, have not unnaturally passed to a belief that the existence of orderly or purposeful creations necessarily demands the existence of an ordering and purposing Creator.

The use of the word *cosmos* itself in a metaphorical sense, meaning an all-inclusive universe, is credited by Aëtius [1] to Pythagoras, though Diogenes Laertius [2] says that Pythagoras applied the term merely to the heaven. It has sometimes, then, been held that the doctrine of teleology first appeared in Greek thought with Anaxagoras, of whom Plutarch [3] remarks that "he

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[1] Aëtius 2, 1, 1 (Doxogr. Gr.[2] (1929), 327); so also [Galen], Hist. Philos. 44 (Doxogr. Gr.[2], 621).

[2] 8, 48. The separation of arguments based on order (eutaxiology of L. E. Hicks, A Critique of Design Arguments [1883], 1) from those based on design or purpose (teleology) seems unfruitful.

[3] Pericl. 4, 4 (I quote from B. Perrin's translation. In subsequent notes the translations used are usually those in the Loeb Classical Library or in the Oxford translation of Aristotle); Diels, Vorsokr. 59 B 12, with the expression *πάντα διεκόσμησε νοῦς* (cf. also the phraseology of Diog. L. 2, 6); Plat. Phaed. 97 c; Legg. 12, 967 b; Phileb. 30 d: *τοῖς μὲν πάλαι ἀποφηναμένοις ὡς ἀεὶ τοῦ παντὸς νοῦς ἄρχει.* Against the view of E. Rohde, Psyche, 2[4] (1907), 192, n. 1, that Anaxagoras employed teleology cf. W. A. Heidel in Proc. Amer. Acad. of Arts and Sciences 45 (1910), 93, n. 60.

was the first to enthrone in the universe, not chance, nor yet necessity, as the source of an orderly arrangement (διακόσμησις), but mind (νοῦς) pure and simple, which distinguishes and sets apart, in the midst of an otherwise chaotic mass, the substances which have like elements." And Aristotle in the Metaphysics [4] had already declared: "When one man said, then, that reason was present — as in animals, so throughout nature — as the cause of order and all arrangement, he seemed like a sober man in contrast with the random talk of his predecessors. We know that Anaxagoras certainly adopted these views, but Hermotimus of Clazomenae is credited with expressing them earlier." Aristotle further suggests that we should suspect such an idea in Hesiod or Parmenides, but he postpones to another time the determination of priority among these thinkers [5] — a promise unfortunately unfulfilled. The shadowy wonder-worker Hermotimus is too uncertain, as even Aristotle felt, to be established as the founder of this doctrine, yet from an early date, perhaps by the earlier Pythagoreans,[6] an order in the universe appears to have been recognized. The credit of first formulating such a teleological concept, so far as our extant fragments go, belongs to a pupil of Anaxagoras, Diogenes of Apollonia,[7] in Crete,[8] in the last third of the Fifth Century, who, in a striking fragment [9] of his work On Nature (περὶ φύσεως), declares that "without an intelligence (νόησις) it would not be possible that the substance of things should be so distributed as to keep all within due measure, with winter and summer, night and day, showers and wind and sunshine. Other phenomena also," he continues, "if one wishes to reflect upon them, he would find arranged in the most beautiful manner possible." [10] Here ap-

[4] Met. 1, 3, 984 b 15 (tr. W. D. Ross); cf. H. Cherniss, Aristotle's Criticism of Presocratic Philosophy (1935), 222, n. 20; 292, n. 8.

[5] Met. 1, 4, 98 b 32.

[6] See, for example, W. C. Greene in Harv. Stud. in Class. Philol. 47 (1936), 97.

[7] Cf. W. Theiler, Zur Gesch. d. teleologischen Naturbetrachtung bis auf Aristoteles (1925), 5–6; Greene, op. cit., 119–120; W. W. Jaeger, Paideia (Engl. tr.), 1 (1939), 337, for the connection by Diogenes "of the old hylozoism with a new teleological view of nature."

[8] According to Steph. Byz. p. 106 Meineke.

[9] Fr. 3 Diels (preserved by Simplicius).

[10] "Thus Diogenes proclaimed what young Socrates, according to the Phaedo

pears in brief the theme of a doctrine more fully elaborated in two famous passages in Xenophon's Memorabilia. These purport to record conversations of Socrates, the first [11] with the dwarfish atheist, Aristodemus, in which Socrates asks, "Tell me, Aristodemus, do you admire any human beings for wisdom?" "I do," he answered. "Tell me their names." "In epic poetry Homer comes first, in my opinion; in dithyramb, Melanippides; in tragedy, Sophocles; in sculpture, Polyclitus; in painting, Zeuxis." "Which, think you, deserve the greater admiration, the creators of phantoms without sense and motion, or the creators of living, intelligent, and active beings?" "Oh, of living beings, by far, provided only they are created by design and not mere chance." "Suppose that it is impossible to guess the purpose of one creature's existence, and obvious that another's serves a useful end, which, in your judgement, is the work of chance, and which of design?" "Presumably the creature that serves some useful end is the work of design." From this start Socrates continues to illustrate purpose, by briefly noting the adaptations to their appropriate ends [12] of man's organs of sight, hearing, smell, and taste; of his teeth, mouth, and digestive system; his philoprogenitiveness, his upright posture, his organs of speech, and his intelligent soul. The second conversation,[13] between Socrates and Euthydemus, is yet more wide-ranging in its illustrations, explaining light and darkness, food and drink, heat and coolness, as all divinely ordered for the safety and convenience of man. "I begin to doubt," says Euthydemus, "whether after all the gods are occupied in any other work than the service of man. The one difficulty I feel is that the lower

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(97 b–c), had longed to find proclaimed by Anaxagoras, and deserves in all probability to be called the first teleologist among Greek philosophers"; Greene, op. cit., 124.

[11] 1, 4, 2–14 (tr. Marchant).

[12] On this whole subject cf. S. O. Dickerman, De Argumentis quibusdam apud Xenophontem, Platonem, Aristotelem obviis e Structura Hominis et Animalium petitis. Diss., Halle, 1909.

[13] Mem. 4, 3, 3–12. This passage and that just mentioned are summarized by Sext. Emp. Adv. Phys. 1, 92–94. Elsewhere in Xenophon (e.g., De Re equest. 5, 6; 5, 8) we find teleology applied to features in the structure of animals. Theiler (op. cit., 16) maintains that Xenophon draws from earlier sources, because he divides into two conversations closely related materials, yet had he used as a source Plato's Philebus and merely expanded it from his own work he would not have separated the two parts.

animals also enjoy these blessings." "Yes," replies Socrates, "and is it not evident that they too receive life and food for the sake of man?," after which he develops this thought in some detail. This conversation, like the first, passes off into mention of the help which the gods have given men by the art of divination, and it would appear as though in some original form the two conversations were parts of a single discussion which itself passed into the mention of divination, for the same arrangement is to be noted in Plato's Timaeus, where a highly teleological account of the vital organs [14] is immediately followed by mention of the divine gift of divination, as again in the Supplices of Euripides,[15] and, at a later date, in Cicero's De Natura Deorum.[16]

The implications of these two passages in Xenophon — clearly parts of one larger central doctrine — are various and important. First, the divine purpose, which Diogenes had expressed in general terms, is here exhibited both in the small units of organic life and in the behavior of the largest members of the universe, the sun and the other heavenly bodies. In other words, we find a clear recognition of the analogy, so far as divine purpose goes, of the microcosm and the macrocosm, which as early as Anaximenes had been compared upon other grounds.[17] Secondly, while teleology is noted in the lower animals, they are not yet studied for their own sakes nor even for the light which anatomical research might cast upon the structure of man — as Galen, for example, centuries later has many observations upon the comparative anatomy of man and the ape —, but only for the most sketchy kind of illustrative purpose, to show the usefulness of these animals to man. Lack of careful dissections and of microscopes and other aids is in part the explanation of this, but even more important is the consideration that the whole doctrine was still, comparatively speaking, in its infancy. Thirdly, it may be observed that the first conversation is held with a disbeliever, Aristodemus, and the

[14] 69 c–71 d. [15] 201–213. [16] 2, 162–163.

[17] Aët. 1, 3, 4 (Doxogr. Gr.[2] 278): *οἷον ἡ ψυχή, φησίν, ἡ ἡμετέρα ἀὴρ οὖσα συγκρατεῖ ἡμᾶς, καὶ ὅλον τὸν κόσμον πνεῦμα καὶ ἀὴρ περιέχει.* The analogy is noted by Theiler, op. cit., 22.

second with the rather shallow and opinionated Euthydemus. Arguments for belief in the gods are not required in ages of universal faith; it is only when popular belief has been assailed or weakened by sceptical intelligence directed toward religious doctrines, as in the Fifth Century the belief in arbitrary and capricious deities had been challenged by such men as Protagoras and Anaxagoras,[17a] that philosophical defences need be called into play, as is recognized by Plato in the Laws.[18] Thus, to Protagoras Norden[19] would ascribe the reproach against Providence that it made men naked and unarmed as contrasted with the brutes.[20] Aristotle refutes this objection in his work De Partibus Animalium,[21] on the ground that man's possession of the hand gives him more varied forms of defence than are granted to the brutes.[22]

That the views in the two passages under discussion are ascribed by Xenophon to Socrates himself need not imply that they at all accurately reproduce his words; indeed, certain modern writers[23] have attempted, unconvincingly, I think, to explain them as later interpolations from Stoic sources. But

[17a] Cf. M. P. Nilsson in Harv. Theol. Rev. 33 (1940), 7–8: "The criticism of the intelligentsia of the end of the fifth century B.C. had uprooted the old gods by denouncing their arbitrariness and immorality. To this purpose the demand for morality, justice, and order was urged, and when the gods failed to fulfill the demand they were doomed. When philosophy with Plato and Aristotle took up the defence of the belief in gods it pointed to the purposeful structure of the universe which could not be understood unless a Supreme Being had created it, and unless it were animated by a World soul." A somewhat similar rationalizing yet essentially religious purpose is claimed by C. Bailey (Proc. Class. Assoc. 19 [1922], 14) for Lucretius, and by J. H. Robinson (The Mind in the Making [1921], 124–125) for the philosophic and scientific reaction against notions of capricious and arbitrary divine intervention, beginning with the thirteenth century. The Stoic attempt to retain both 'interventionist' and 'isolationist' deities can be clearly seen in such a passage as Cic. N.D. 2, 14–15. — W. A. Heidel, Proc. Amer. Acad. of Arts and Sciences 45 (1910), 94–95, thinks that philosophers of the sixth and fifth centuries attributed to φύσις so many divine functions that Socratic teleology was a foregone conclusion.

[18] 10, p. 891 a–c; cf. also W. W. Jaeger, Aristotle (English trans., 1934), 157.

[19] Jahrb. f. Philol., Supplbd. 19 (1893), 435.

[20] Cf. Plat. Protag. 321 c.

[21] 4, 10, 687 a 23.

[22] Antiphon the Sophist, in his work On Truth, is also, on the basis of Orig. c. Cels. 4, 25, thought by Norden (l. c.) to have assailed the divine skill in fashioning man.

[23] Whose views are summarized but not accepted by H. Gomperz in Neue Jahrb. f. d. cl. Altert. 53 (1924), 146; W. Theiler, op. cit., 14–15.

that they contain ideas which Socrates had himself used seems at first sight plausible, when one compares their content with various passages in Plato, to whom I next turn.

Passing over such imaginative teleology as that in the seventh book of the Republic,[24] in which our eyes are said to be made for the study of astronomy and our ears for the appreciation of harmony, and such general but preparatory statements as that in the Timaeus [25] — our first great cosmology in which design plays a chief rôle — that God considers order better than disorder, we may observe the lengthy and more practical recital in the Timaeus [26] of the arrangement of the human body, with its erect posture,[27] as distinguished from the prone forms of the brutes, intent only upon their food — a conceit appearing repeatedly in later Greek and Latin writers —, and with a perfect appropriateness in its midriff, heart, lungs, liver, digestive tract, marrow, brain, bone, flesh, sinews, joints, mouth, skin, hair, nails, veins, respiratory system, and blood, all discussed in great detail. Analogies of macrocosm and microcosm appear at some points.[28] We are asked whether we are to assume that the uni-

[24] 530 d.

[25] F. E. Robbins, The Hexaemeral Literature (1912), 4.

[26] 69 c–71 d; 72 e–81 e. Cf. R. G. Bury, Loeb Classical Library ed. of the Timaeus (1929), 5: "A thorough-going teleological explanation of the Universe is what Plato desiderated in the Phaedo, and what he attempts to provide in the Timaeus."

[27] Tim. 90 a. Cf. Theiler, op. cit., 29; 32; also the work of S. O. Dickerman cited in n. 12 supra.

[28] E.g., in filling and evacuation (Tim. 81 a–b); in exercise (Tim. 88 c–89 a); and in the elements of which both large and small are composed (Phileb. 29 a–30 b); cf. Theiler, op. cit., 21–22; 77–78. On this subject cf. G. P. Conger, Theories of Macrocosm and Microcosm in the Hist. of Philosophy (1922), in which pp. 1–27 deal with antiquity and 29–36 with patristic writers. The earliest trace, according to Conger (p. 2), is in Anaximenes (ap. Stob. Ecl. 1, 10, 12): *οἷον ἡ ψυχή, φησίν, ἡ ἡμετέρα, ἀὴρ οὖσα, συγκρατεῖ ἡμᾶς, καὶ ὅλον τὸν κόσμον πνεῦμα καὶ ἀὴρ περιέχει.* For a recent view of this concept cf. L. J. Henderson, The Fitness of the Environment (1924), 278–279: "There is but one immediate compensation for this complexity: a proof that somehow, beneath adaptations, peculiar and unsuspected relationships exist between the properties of matter and the phenomena of life; that the process of cosmic evolution is indissolubly linked with the fundamental characteristics of the organism; that logically, in some obscure manner, cosmic and biological evolution are one. In short, we appear to be led to the assumption that the genetic or evolutionary processes, both cosmic and biological, when considered in certain aspects, constitute a single orderly development that yields results not merely contingent, but resembling those which in human action we recognize as purposeful." Cf. also p. 312.

verse is governed by a capricious chance or ordered by mind and wisdom.[29] We observe and attempt to imitate the order of the heavens.[30] God it is who brought order out of chaos; [31] a thing moved implies a mover; [32] hence the ordered courses of the heavens necessitate a superior soul regulating the cosmos; [33] and earth, sun, stars, the universe, and the succession of the seasons are evidences of the existence of deity.[34] This brief anthology of views expressed at length in several different works — the Republic, Laws, Timaeus, and Philebus — strikes one at once by its essential likeness to the conversations in Xenophon's Memorabilia,[35] and both authors use the same term (δημιουργός) for the Creator.[36] In a passage in the Laws [37] the Athenian stranger reports the mistaken view of some that the heavens, animals, plants, and changes of the seasons are due, not to reason or deity, but to nature and chance, thus significantly recognizing that theistic arguments were at the time far from unanimously accepted, and anticipating the later conflict at this same point between Stoics and Epicureans.

A natural assumption, when we note the agreement between Xenophon and Plato, would be that they have a common origin in the teachings of Socrates. At this point, however, we are confronted by a parallel in Euripides, who in the Supplices [38] makes Theseus praise the deity who raised men from the brutes and gave them reason and the tongue for speech, food and drink

[29] Phileb. 28 d; 30 c–d.

[30] Rep. 6, 500 c. If Cicero (N.D. 2, 37) seems to ascribe this thought to Chrysippus it must appear in him only as a derivative from an earlier source. The order of the heavenly bodies is in Tim. 40 c compared to a crowd of human dancers — a conceit found in several later writers; cf. R. E. Witt in Class. Quart. 24 (1930), 200–201.

[31] Tim. 30 a–b; 69 b.

[32] Tim. 57 e.

[33] Legg. 10, 897 c; 898 c; 903 b; 12, 966 e; cf. Diog. L. 3, 71.

[34] Legg. 10, 886 a; cf. Epinom. 6, 983 b–c.

[35] Theiler, op. cit., 21, compares in parallel columns Mem. 1, 4, 8, and Phileb. 29 a–30 a.

[36] Cf. F. Solmsen in Trans. Am. Philol. Assoc. 67 (1936), 214.

[37] 10, 889 b–c.

[38] 201–210. This likeness was pointed out by F. Dümmler, Akademika (1889), 278, who (p. 112) would trace the ideas back to Diogenes of Apollonia. For a discussion of the relation of this passage to Xenophon cf. Theiler, op. cit., 38–44, who at points appears oversubtle in his attempt to discover multiple sources.

from the earth, shelter and seaborne commerce; after which the poet passes on,[39] as in the two conversations in Xenophon and the treatment in the Timaeus,[40] to speak of divination, beginning with that by means of the liver. A relation between all these passages seems natural, and the addition in each case of the mention of divination — not so closely related to the thought as to be an obvious logical appendage — suggests a written source, or at any rate a unity of tradition more close than the mere vague background of contemporary commonplaces. Since Euripides was at various other points considered by the ancients to have been influenced by Socrates,[41] Gomperz argues [42] that both Xenophon and Euripides here derive immediately from the teachings of Socrates (who might, of course, have been himself influenced in his thought by Diogenes of Apollonia). Yet against this purely oral derivation of three quite distinct writers from a philosopher who did not commit his views to writing — and whom Xenophon, for example, must have heard at least forty years before he was composing the Memorabilia [43] — are to be set, on the one hand, the coincidence of these allusions to divination, and, more significantly, a rather impressive series of likenesses between Xenophon and the scanty remains of Diogenes, as well as what can be plausibly reconstructed of Diogenes from the study of sources made in some detail by Theiler in his substantial treatise on teleological views of nature up to the time of Aristotle.[44] If the likenesses which he finds between Diogenes and Xenophon seem rather more striking than those between Diogenes and Plato [45] it may be because the more matter-of-fact Xenophon has repeated with greater accuracy the tenets of his source while Plato has passed the inherited ideas through the alembic of his own mind, from which they emerge as assimilated portions of his own thought.[46]

[39] 211–213. [40] 71 a–72 b.

[41] H. Gomperz in Neue Jahrb. f. d. cl. Altert. 53 (1924), 149–150.

[42] Op. cit., 145–151; but see on the contrary Theiler, op. cit., 50, n. 3.

[43] Theiler, op. cit., 50.

[44] Op. cit., 19–32. Theiler finds likenesses to Diogenes also in the Symposium (5, 5) and in some passages which he thinks both Xenophon and Aristotle derive from him.

[45] Theiler, op. cit., 76–78.

[46] On teleology in Plato cf. Theiler, op. cit., 74–78.

Eduard Norden, in an interesting digression,[47] remarks that the teleological view of nature — and particularly of man —, for which the Presocratic systems had little opportunity and which in Socrates and Plato finds only incidental mention because of their lack of interest in things purely physical, has as its first important representative Aristotle, and culminates in the Stoic theodicy. By Aristotle, then, whose philosophy of nature is strikingly teleological,[48] we are repeatedly told that nature produces nothing superfluous or without a purpose, but everything for the sake of something else, never omitting what is necessary,[49] since she operates for the sake of an end,[50] and everything exists for some final cause.[51] In greater fulness than that of Plato's Timaeus, Aristotle, on the basis of his more abundantly collected scientific observations, at one time particular, at another generalized, discusses man's physical adaptation to his various needs, dwelling in detail upon such points as his sense-organs,[52] his lips and tongue,[53] teeth,[54] the human hand,[55] the uses of hair,[56] the purpose of sexual differences,[57]

[47] Jahrb. f. Philol., Supplbd. 19 (1893), 435.

[48] Cf. W. W. Jaeger, Aristotle (English tr., 1934), 75, n. 0; A. O. Lovejoy and G. Boas, Primitivism and related Ideas in Antiquity, 1 (1935), 187–188.

[49] E.g., De An. 2, 4, 415 b 16; 3, 9, 432 b 21; 3, 12, 434 a 31; De Gen. An. 2, 6, 744 a 36; 2, 6, 744 b 16; De Part. An. 1, 1, 641 b 12; 1, 5, 645 a 23; 2, 13, 658 a 8; 3, 1, 661 b 24; 4, 13, 695 b 18; De Incess. An. 2, 704 b 15; 12, 711 a 18; De Caelo 1, 4, 271 a 34; 2, 11, 291 b 13; Frg. 230 Rose. The idea is often repeated in later writers, e.g., Cic. N.D. 1, 92; 2, 121.

[50] De An. 2, 4, 415 b 16; De Somno et Vig. 2, 455 b 17.

[51] De Gen. An. 5, 1, 778 b 11; De Part. An. 1, 1, 640 a 18: "the process of evolution is for the sake of the thing finally evolved, and not this for the sake of the process." In De Gen. An. 5, 1, 778 a 30 Aristotle wavers; the eye exists for a final cause, but it is not blue for a final cause, unless this condition be characteristic of the kind of animal. L. J. Henderson, The Order of Nature (1925), 18, thinks this admission damaging to the logical consistency of Aristotle's teleology, and believes that there are altogether too many cases of dysteleology. But perhaps the weakness in Aristotle's statement is rather in assuming that a fallible human thinker is always able to detect the presence or absence of a final cause, and hence in this case to venture to deny a final cause to the blueness of a blue eye. And cf. what Aristotle himself says in n. 71 infra.

[52] E.g., the eyes (De Sens. 2); De An. 3, 12–23 has not a little on the senses in general.

[53] De Part. An. 2, 16, 659 b 28. The De Audibilibus has much throughout on the voice.

[54] De Part. An. 3, 1, 661 b 13.

[55] De Part. An. 4, 10, 687 b 3.

[56] De Part. An. 2, 15, 658 b 6.

[57] Oec. 1, 3, 1343 b 30. This work is not by Aristotle, but probably reflects his teaching.

and man's whole body as designed for some end.[58] Many of his observations apply also to the brutes. For example, he remarks [59] that the walls of the belly in all animals are devoid of bones in order that there may be no hindrance to the expansion which necessarily occurs in this part after a meal, for even such animals as have no graces to charm the sense "by disclosing to intellectual perception the artistic spirit that designed them, give immense pleasure to all who can trace links of causation, and are inclined to philosophy." [60] These originals, he further notes,[61] are far more interesting than any of those imitations of them by painters or sculptors in which we take such delight. Aristotle feels no hesitation, then, in detecting traces of the same design in the lower animals, whether it be in their anatomy, their defensive mechanisms, or their ability to secure their food,[62] though he seems always convinced that the brutes are created for the sake of man,[63] just as plants — whose individual parts are likewise adapted to *their* growth and reproduction [64]— are made for the sake of animals.[65] We men are in a sense an end, and other things are made for our sakes.[66] Similarities are occasionally noted between the microcosm and the macrocosm,[67] for order runs through all things, "fishes, and fowls, and plants, and the world is not such that one thing has nothing to do with another, but all are interrelated," [68] — almost an anticipation of the Stoic doctrine of sympathy, of which more

[58] De Part. An. 1, 5, 645 b 14.

[59] De Part. An. 2, 9, 655 a 2.

[60] De Part. An. 1, 5, 645 a 7.

[61] De Part. An. 1, 5, 645 a 11.

[62] E.g., Hist. An. 9, 37, 620 b 10. These observations are so abundant in all his biological works as to need no citation here. In one curious case, however, an animal has been so designed by nature as to give its prey a greater chance to survive (De Part. An. 4, 13, 696 b 27)!

[63] Pol. 1, 8, 1256 b 15.

[64] Phys. 2, 8, 199 a 24.

[65] De Plantis 1, 2, 817 b 25. Again not a genuine work, yet this doctrine seems a necessary part of Aristotle's views.

[66] Phys. 2, 2, 194 a 35.

[67] E.g., De Gen. An. 1, 2, 716 a 15. Cf. also Theiler, op. cit., 93–95. The earliest use of μικρὸς κόσμος (though not of the idea) is found, according to G. P. Conger (Theories of Macrocosm and Microcosm in the Hist. of Philosophy [1922], 11), in Aristot. Phys. 8, 2, 252 b 26.

[68] Met. 11, 10, 1075 a 17.

anon. "That the heaven, if it had an origin, was evolved and is maintained by" a purposeful cause "there is even more reason to believe than that mortal animals so originated. For order and definiteness are much more plainly manifest in the celestial bodies than in our own frame, while change and chance are characteristic of the perishable things of earth." [69] In the Politics [70] Aristotle tells us that "to introduce order into the unlimited is the work of a divine power, of such a power as holds together the universe." "It is absurd to suppose," he says in the Physics,[71] "that purpose is not present because we do not observe the agent deliberating, for art does not deliberate." Again, there must be a first principle, for final causes cannot go on in sequence *ad infinitum*.[72] In an eloquent, almost evangelistic, passage translated by Cicero [73] from Aristotle's early and popular but now lost dialogue De Philosophia — upon which much of pagan and Christian theology seems to depend — we find strikingly set forth — not without influence from the cave in Plato's Republic,[74] as it may in turn have been influenced by the cave of Empedocles — the effect which would be produced upon intelligent but hitherto uninformed minds by a sudden realization of the beauty and order of the starry heavens.

Aristotle's own scientific study of phenomena might easily lead others, who doubted his teleological presuppositions, to explain them rather upon mechanistic grounds. In the Physics [75]

[69] De Part. An. 1, 1, 641 b 17. Theophrastus, Met. 15, though thinking it difficult in all cases to link things with their final causes, yet recognizes the dependence of plants and fruits on the sun and the seasons.

[70] 7, 4, 1326 a 31.

[71] 2, 8, 199 b 27.

[72] Met. α, 2, 994 a 1.

[73] N.D. 2, 95 (=Aristot. frg. 12 Rose, who juxtaposes with it related passages in Philo showing Aristotelian influence). Cf. also frg. 10 Rose. Variants upon this theme, as in Cic. N.D. 1, 100; Tusc. 1, 68–70; 5, 69; De Or. 3, 178–179, may derive in part, at least, from the same source. Further, with this passage and the perhaps related one in Cic. N.D. 2, 97 we should surely compare [Plat.] Axiochus, 370 b–c.

[74] Cf. J. H. Wright in Harv. Stud. in Class. Philol. 17 (1906), 130–142, who is, however, cautious in his decision of the question; W. W. Jaeger, Aristoteles (1923), 167–168. The likeness between Plato's cave and that of Empedocles is recognized by Plotin. Enn. 4, 8, 1.

[75] 2, 8, 198 b 18.

he foresees that some may ask, "Why should not nature work, not for the sake of something, nor because it is better so, but just as the sky rains, not in order to make the corn grow, but of necessity?" And a little farther on,[76] his adversaries, strongly prophetic of the evolutionary doctrine of natural selection,[77] later to be propounded by Darwin and Wallace and to become a powerful opponent of theistic arguments based upon order and design, are made to declare that wherever "all the parts came about just as they would have been if they had come to be for some end, such things survived, being organized spontaneously in a fitting way; whereas those which grew otherwise perished and continue to perish." This argument Aristotle briefly dismisses by asserting that the results of chance or spontaneity lack the regular and normal adaptation to an end necessary for the acceptance of such a theory. These phenomena, then, must be for an end, but since they are natural in character natural things must be for some end, such as the permanence of their respective types.[78] The mention in the context of the name of Empedocles suggests that he was the author of this objection, and this suspicion is confirmed in the De Partibus Animalium,[79] where Aristotle asserts that "the process of evolution is for the sake of the thing finally evolved, and not this for the sake of the process. Empedocles, then, was in error when he said that many of the characters presented by animals were merely the results of incidental occurrences during their development." And, again,[80] "Yet there are some who, while they allow that every animal exists and was generated by nature, nevertheless hold that the heaven was constructed to be what it is by chance and spontaneity; the heaven, in which not the faintest sign of hap-hazard or of disorder is discernible!" Empedocles, however, was not the only opponent, for elsewhere Aristotle reproaches Democritus with neglect of the final cause and with reducing all operations of nature to necessity,[81] "To say that necessity is the only cause is much as if we should

[76] 2, 8, 198 b 28.

[77] Cf. W. D. Ross, Aristotle[2] (1930), 78.

[78] Ross, l. c.

[79] 1, 1, 640 a 18.

[80] 1, 1, 641 b 21; cf. H. Cherniss, Aristotle's Criticism of Presocratic Philosophy (1935), 247.

[81] De Gen. An. 5, 8, 789 b 3; cf. Cherniss, op. cit., 179.

think that the water has been drawn off from a dropsical patient on account of the lancet, not on account of health, for the sake of which the lancet made the incision." [82] Elsewhere [83] Aristotle holds that if Democritus and others who rejected the doctrine of a final cause for all that nature does had examined the phenomena more carefully they would have reached a different conclusion. We may infer that could Aristotle have known of the Epicurean theory of chance as the cause of the universe he would have met it with similar expressions.

In the enumeration just given I have not attempted to arrange chronologically the different Aristotelian works cited, but it must not, of course, be overlooked that in his early works, particularly his De Philosophia, he was more closely under Platonic influences, while in his later and more independent writings his attitude toward the final cause changed, shall we say, from equating it with ψυχή to including it in the concept of φύσις,[84] a power succeeding to the Platonic world-soul and taking over some of the distinctly anthropomorphic vocabulary earlier used to describe the operations of the demiurge.[85] When he occasionally employs such terms as "God and nature" [86] or simply "God," [87] Aristotle is perhaps merely making a concession to literary convention or to popular thought,[88] yet he still holds fast to the notion of adaptation to an end, even if it be only in the unconscious teleology of nature rather than in the working out of a divine plan.[89]

The next important group to be considered is that of the Stoics. To a school with so large a body of dogma and active over so long a period many views are ascribed which it is not always easy to assign to their individual authors. We are, however, told by Cicero [90] that Zeno himself considered the nature

[82] De Gen. An. 5, 8, 789 b 12.

[83] De Respir. 8 (2), 471 b 26; cf. Cherniss, op. cit., 260.

[84] Cf. Theiler, op. cit., 84–85; Ross, op. cit., 179; W. K. C. Guthrie, ed. of Aristot. De Caelo (1939), xv–xxxvi.

[85] E.g., De Part. An. 4, 10, 686 a 22. Cf. Theiler, op. cit., 89–90; Ross, op. cit., 78.

[86] De Caelo 1, 4, 271 a 33.

[87] De Gen. et Corr. 2, 10, 336 b 32.

[88] Cf. Ross, op. cit., 79.

[89] Cf. Ross, op. cit., 179.

[90] N.D. 2, 58. On the Stoic use of the analogy of macrocosm and microcosm cf. L. Stein, in Berl. Stud. f. cl. Philol. u. Arch. 3, 1 (1886), 205–214, especially 207.

of the world to be "not merely craftsmanlike (*artificiosus*) but actually a craftsman (*artifex*), whose foresight plans out the work to serve its use and purpose in every detail," its mind, correctly designated as prudence or providence (*πρόνοια*), being directed to secure for the world the structure best fitted for its survival, absolute completeness, and consummate beauty of every kind. How far Zeno developed this thought extant remains fail to show, but his follower Cleanthes made it one of the four chief arguments for belief in the divine existence,[91] the others being revelation through divination, the advantages men gain from the bounty of the gods, and all cases of supernatural phenomena — of which the second is, of course, closely connected with the argument from design. Among these four that from order and design seems the most cogent, because based upon an increasing body of observed phenomena rather than upon dogmatic presuppositions or passing emotional states. The regularity of the heavens shows that they are not the result of chance, and the great dwelling-house of the universe reveals an order analogous to that which in a gymnasium or forum indicates a purposeful ruler.[92] The fondness of Chrysippus for collecting all kinds of details [93] and his proclivity for syllogistic methods are both focussed upon this tenet of the Stoic faith. "If there be," he says, "something in the world which man's mind and human reason, strength, and power are incapable of producing, that which produces it must be superior to man; now the heavenly bodies and all these things that display a never-ending regularity cannot be created by man; therefore that which creates them is superior to man; but what better name is there for this than 'God'?"[94] In the organic world animals, whose species are carefully perpetuated by

[91] N.D. 2, 13–15; 3, 16. In Sext. Emp. Adv. Phys. 1, 60, a different fourfold Stoic division is noted, in which, however, the argument from design is the second point listed.

[92] The same thought is developed by Chrysippus (Cic. N.D. 2, 17; 3, 26; Lact. De Ira 10; 17). In the great hymn of Cleanthes to Zeus (Stoic. vet. Frag. 1, no. 537, lines 7–8) the author declares *σοὶ δὴ πᾶς ὅδε κόσμος, ἑλισσόμενος περὶ γαῖαν, | πείθεται, ᾗ κεν ἄγῃς, καὶ ἑκὼν ὑπὸ σεῖο κρατεῖται.*

[93] Tusc. 1, 108: *permulta alia colligit Chrysippus, ut est in omni historia curiosus.*

[94] N.D. 2, 16; cf. 3, 25.

nature,[95] are some of them designed for self-defence, by hides, spines, scales, horns, tusks, stinging powers, offensive odors, or — in the case of the cuttlefish, by the emission of an inky, concealing, liquid [96] —, others for mutual advantage, like the shell-fish called the *pin(n)a* and its symbiotic crab, the *pinoteres*,[97] but all are ultimately for the use and advantage of man. Further, the earth itself is for the sake of those possessing reason, that is, for men and gods.[98] Cicero [99] and later Porphyry [100] report that Chrysippus also asserted that, with the exception of the universe, everything was made for the sake of something else, crops and fruits for animals, animals for man, and man, a little portion of a finished whole, to observe and imitate the universe. More specifically, the brutes furnish us with food, clothing, and medicines; they carry our burdens, plough our fields, guard our property, and exercise our bodies when we hunt.[101] The pig, for example, has no reason for being save to furnish us with meat, its soul having been given it simply in place of salt, to keep its flesh from spoiling. Elsewhere [102] Chrysippus asserts that for the sake of both men and gods all things are created. Analogies between macrocosm and microcosm seem for the Stoics to have been supported by the theory of the interrelation or sympathy of all things, which, appearing as early as the Presocratics (Xenophanes? Pythagoras, Democritus), was especially developed by the Stoic school, with the exception of that notable but semiheretical member, Panaetius.[103]

As early as Chrysippus, some opponents — who look like

[95] N.D. 2, 127. Cf. also Diod. 2, 50, 7.

[96] N.D. 2, 121; 2, 127.

[97] N.D. 2, 123–124; Fin. 3, 63; parallel passages in Stoic. vet. Frag. 2, nos. 729–730; the use of this illustration by Chrysippus is attested by Athen. 3, 89 d.

[98] N.D. 2, 133.

[99] N.D. 2, 37.

[100] De Abstin. 3, 20.

[101] N.D. 2, 158–161; for the pig: 2, 160. Cf. also Diod. 1, 35, 7 (Cic. N.D. 1, 101); 3, 69, 2, on animals and trees made by nature for man's sake; these references I owe to Professor A. D. Nock.

[102] Cic. Fin. 3, 67.

[103] Cf. A. Schmekel, Die Phil. d. mittl. Stoa (1892), 191; A. S. Pease on Cic. De Div. 2, 34; K. Reinhardt, Kosmos u. Sympathie (1925).

sceptic precursors of Carneades — seem to have indicated the existence of flaws in this supposedly perfect divine workmanship. In a fragment of the third book of Cicero's De Natura Deorum preserved by Lactantius [104] the question is asked why, if the gods made everything for the sake of man — as the Stoic speaker Balbus had just maintained in the second book of Cicero's work [105] — there should exist things objectionable and harmful to man, both on land and in the sea. The Stoic reply suggested uses, already known or yet to be discovered, even for mice, moths, and snakes, and from Plutarch [106] we learn that this defence was that made by Chrysippus.

In addition to Zeno, Cleanthes, and Chrysippus, notice must be taken of that highly controversial figure, Posidonius. In Cicero's classic treatment of theories propounded by various philosophers on the nature of the gods Posidonius is mentioned by name only three times, once [107] with Diodotus, Philo, and Antiochus as a teacher of Cicero; again,[108] as the maker of a planisphere similar to that invented by Archimedes; and, finally,[109] as the author of a work περὶ θεῶν, in the fifth book of which he declared that Epicurus was in reality an atheist and only in name a supporter of gods, in order to avoid the odium attaching to atheism. Despite these scanty allusions [110] various scholars, such as P. Schwenke,[111] J. B. Mayor,[112] P. Wendland,[113] H. Diels,[114] and C. Giambelli,[115] on the basis of comparisons of Cicero with views elsewhere ascribed to Posidonius, have considered the Rhodian philosopher as practically the sole source of

[104] De Ira 9–12. The same idea is developed in Cic. Acad. 2, 120, where see J. S. Reid's note for many parallels.

[105] N.D. 2, 154–167.

[106] De Stoic. Repugn. 21.

[107] 1, 6.

[108] 2, 88.

[109] 1, 123; cf. 3, 3.

[110] On the temptation to exaggerate the importance of Posidonius cf. J. F. Dobson in Class. Quart. 12 (1918), 179–195, and more incidental protest by many scholars elsewhere.

[111] Jahrb. f. cl. Philol. 119 (1879), 49–66.

[112] Edition of N.D. 2 (1883), xvi–xxiii.

[113] Archiv f. Gesch. d. Phil. 1 (1888), 206.

[114] Elementum (1899), 2.

[115] Riv. di Filol. 31 (1903), 450–462.

the second book of the De Natura Deorum, while others [116] have, almost without exception, recognized him as one of Cicero's sources, especially for the teleological parts of the book.[117] To decide here this vexed controversy would be both presumptuous and impossible. *Non nostrum inter vos tantas componere lites.* If I might be allowed, however, to express my present impression — subject to later modification — it would be that for the teleological views here set forth Posidonius, in his works περὶ θεῶν, περὶ κόσμου, and similar treatises, and in his commentary on Plato's Timaeus, was in very considerable measure responsible, not as an original thinker but as a great collector, like Chrysippus, who amassed from his varied scientific interests many illustrations of divine purpose in the cosmos. That he introduced any new principle into the discussion may be doubted; rather, his hands were helpful in rolling up the impressive snowball [118] of illustrative materials which we shall later encounter in Philo, Origen, and the extensive Christian cosmological literature,[119] and which is already prominent in the next work to be discussed, Cicero's De Natura Deorum.

In the second book of this interesting work Lucilius Balbus develops at length the Stoic theology, giving especial attention, in nearly thirty Teubner pages,[120] to the teleological argument, derived, as he tells us,[121] from our wonder at phenomena in the heavens and upon the earth — phenomena which he describes in general, both by the extract from Aristotle's De Philosophia already mentioned and by an appendix,[122] possibly his own, in

[116] E.g., R. Hirzel, Untersuch. z. Cicero's philos. Schriften, 1 (1877), 224 (Posidonius, Apollodorus, and Panaetius); H. Usener, Epicurea (1887), lxvii (Posidonius and Clitomachus [i.e., Carneades]); K. Reinhardt, Poseidonios (1921), 215–239 (Chrysippus, Panaetius, and Posidonius); P. Finger in Rhein. Mus. 80 (1931), 151–200 (Antiochus, Posidonius, and Panaetius).

[117] Cf. K. Reinhardt, Kosmos u. Sympathie (1926), 161–177, opposing the view of M. Pohlenz (Gött. gel. Anz. 184 [1922], 169) that Cicero owed his teleology to Panaetius.

[118] The various references to teleological views of Stoics in general I cannot here discuss. Many, however, are to be found in the first book of Sextus Empiricus, Adv. Physicos.

[119] On the works of Posidonius in which his views may have been expressed, see, among others, W. W. Jaeger, Nemesios von Emesa (1914), 110, n. 1; K. Gronau, Poseidonios u. d. jüdisch-christliche Genesisexegese (1914), especially 293–304.

[120] 2, 87–153.

[121] 2, 75.

[122] 2, 98–100.

which, to the marvels in the heavens, he adds those in earth, sea, air, and ether, thus returning to his Aristotelian starting-point in the heavens. With these general statements Cicero combines detailed illustrations, from macrocosm and microcosm, in great fulness, these being naturally the parts in which, by elaborated comparisons, scholars have had their chief success in seeking the sources of this complicated book. For all these marvels there might be three possible causes,[123] nature, chance, or divine purpose. But Balbus dismisses nature (perhaps that of the later thought of Aristotle), because the regular but complex order of the heavenly bodies seems to show reason rather than an unreasoning cause; and chance — the constant theme of the Epicureans — because no chance collisions of atoms seem to form even a temple, a house, or a city,[124] or a single line of poetry,[125] far simpler undertakings than the creation of a universe. The attack on Epicurean chance as an explanation recurs at various points in this [126] and other Ciceronian essays.[127] It might be asserted that these are merely the words of speakers in dialogues and do not represent Cicero's own sentiments any more than when he illustrates certain types of argument in the De Inventione [128] by the stock teleological comparisons of houses, armies, and ships, or by the time-worn syllogisms of Chrysippus. Yet at the end of the De Divinatione,[129] in his own person, he clearly declares: "That there exists some superior and eternal nature and that, one to be looked up to and admired by the human race, the beauty of the universe and the order of celestial phenomena force us to admit," while passages in the orations De Haruspicum Responso and Pro Milone [130] and in the dialogue De Legibus [131] are hardly less explicit.

[123] 2, 43. With this threefold division cf. Ac. 1, 29. [124] 2, 94.

[125] 2, 93. [126] 1, 90–91; 2, 88; 2, 93–94; 2, 115; 2, 153.

[127] Fin. 1, 20; Ac. 2, 121; 2, 125.

[128] 1, 58–59; quoted by Quintil. Inst. 5, 14, 7–9.

[129] 2, 148. Perhaps compare Cic. Hortens. fr. 53 Müller; De Sen. 81; Tusc. 1, 45.

[130] Har. Resp. 19; Pro Mil. 83. A. D. Nock (ed. of Sallustius, De Diis [1926], lxviii, n. 133) considers these two cases as rhetorical arguments only.

[131] 1, 25. One may also compare the statement in Tusc. 1, 63 (with which cf. N.D. 2, 88), in which the skill of the creator of the heavenly bodies is contrasted with that of Archimedes who imitated their motions in his planisphere — both processes, however, illustrating conscious purpose; also cf. n. 73 supra.

But Cicero's De Natura Deorum is not a manual for the propagation of a dogma, but rather one of our earliest and most important comparative studies of theology, more developed and much more readable than those concise scientific collections of opinions which we find in the *Greek Doxographers*, and yet with something of the same striving for dispassionate objectivity. In the manner characteristic of the New Academy, each argument appears with both support and refutation; the authority of great names is subordinated to logical cogency; and the tie vote at the end of the dialogue is designed, I am convinced, not in support of any definite tenets, whether Epicurean, Stoic, or even Academic, but, with the two Academics on opposite sides, to make clear that Cicero's purpose is to illustrate the proper methods rather than the precise results of argumentative inquiry.[132] It is not surprising, then, that the last book of this work is occupied with the refutation of the Stoic arguments for the existence and providential care of the gods, and that the teleological argument came in for its share of the refutation. That this book relied, in large measure, on the sceptical attacks made by Carneades against the Stoics [133] (as preserved in written form by his pupil Clitomachus) essentially all scholars agree.[134] The third main section of the book, directed against the providential government of the universe, is, save for three or four unimportant sentences,[135] entirely lost, in a presumably large and certainly regrettable lacuna, which some have supposed due to the religious scruples of the copyist of the archetype of all our manuscripts,[136] and which includes also a fair proportion of the fourth main section, on the care of providence for mankind, particularly as seen in human physiology and in the subjection of all nature to man's advantage. That the work existed essentially complete as late as the early fourth century is shown by two or three short but important quotations —

[132] Cf. A. S. Pease in Trans. Am. Philol. Assoc. 44 (1913), 25–37. The likenesses to the doxographers may be seen especially in the historical review in N.D. 1, 25–41.

[133] Cf. N.D. 2, 162: *Carneades lubenter in Stoicos invehebatur.*

[134] Cf. Schanz-Hosius, Gesch. d. röm. Lit. 1⁴ (1927), 511.

[135] 3, 65.

[136] There remains the slight chance that some uncollated manuscript, especially in a more isolated tradition, as perhaps in Spain, may yet be found with the missing portions.

one of them verbatim — by Lactantius.[137] Of these one which bears upon the macrocosm asserts, from the analogy of a carpenter and his materials or an artist and his wax, that the Creator did not create the matter from which he built the universe, and if he did not create matter, he did not create the four elements.[138] We are left to our imaginations for the rest of this argument; that Cotta, however, asserted the origin of the universe to have been by chance is quite unlikely, in view of his condemnation in Book I of Epicurean atomism and its implications; [139] in fact clear intimations at one point [139a] show that he considered the cosmos not as constructed but as formed by nature. God does not care for men, Cotta asserts, otherwise he would have given them, not reason (which often harms them), but *right* reason, and would have made all men good, or, failing that, would have rewarded the righteous and punished the evil, quoting the famous line of Ennius,[140] *nam si curent, bene bonis sit, male malis, quod nunc abest.* The Stoic argument that God, like an earthly king, does not attend to details [141] is no fit reply, says Cotta, for the sufferings of the righteous affect, not their goods and chattels, but their very existence. The culmination of the parts preserved to us is a more searching fragment, not explicitly ascribed to Cicero, though rather plausibly assigned to him by Schwenke [142] and later scholars, and called by Lactantius [143] an argument of Epicurus, though it smacks more of the New Academy [144] and may be paralleled in Sextus Empiricus.[145] This declares: "God either wishes to do away with evil and cannot, or he can and does not wish to, or he neither

[137] These fragments are printed in the *editio minor* of Plasberg and Ax (1933) on pp. 145–147. There is also a very brief quotation (Plasberg-Ax, p. 146) in the Verona Scholia on Aen. 5, 95.

[138] Indignantly answered by Lactantius, Inst. 2, 8, 9–59.

[139] 1, 65–66.

[139a] 3, 26–28.

[140] Enn. Telamo, 318 Vahlen.

[141] Cic. N.D. 2, 167: *magna di curant, parva neglegunt*; an ancient analogue to the maxim *de minimis non curat lex.*

[142] In Berl. philol. Woch. 8 (1888), 308–309.

[143] De Ira 13, 20–21.

[144] Perhaps an Academic using arguments borrowed from an Epicurean; cf. R. Philippson in Symb. Osloenses 19 (1939), 22, and n. 1.

[145] Pyrrhon. 3, 10–11.

wishes to nor can, or he both wishes to and can. If he wishes and cannot, he is weak, which is inconsistent with deity; if he can and will not, he is malign, which is equally foreign to a god; if he neither will nor can, he is both malign and weak and therefore not a god; if he both will and can — the only combination which befits a god — whence then come evils and why does he not do away with them?" Further than this *tetralemma*, as Philippson has recently called it,[146] scepticism could hardly go.

These objections to design and its implications appear strikingly in Epicureanism, especially as set forth by Lucretius. Though at times his expressions suggest fossilized relics of theistic teleology,[147] his usual thought runs strongly in the counter direction. Men, he says, who saw celestial phenomena, the causes of which were hidden from them, resorted to deity as an explanation,[148] and gained thus a new set of terrors.[149] But why *should* or how *could* the gods have made the world, either for the sake of mankind or for profit to themselves? [150] Nor in the microcosm are we to look for design; "Do not suppose," says Lucretius, "that the clear sight of the eyes was made in order that we might be able to see before us; or that the ends of the thighs and shins were jointed and placed upon the foundation of the feet, only to enable us to march forward with long strides. . . . Such explanations and all other such that men give, put effect for cause and are based upon perverted reasoning, since nothing is born in us simply in order that we may use it, but that which is born creates the use." [151] Finally, too many faults are found in the world for us to suppose it divinely created — its waste spaces, wild beasts, diseases; its mortality and the gradual corruption and death of its constituent parts.[152] These

[146] Op. cit., 22. This type of reasoning is almost a parody of such Stoic arguments as that in Cic. De Div. 1, 82–83.

[147] E.g., 4, 719–721; 4, 935–936; yet cf. C. Bailey in Proc. Class. Assoc. 19 (1922), 9–25, who would find in Epicureanism a higher and sincerer form of piety than in the conventional religious beliefs of his day.

[148] 5, 1183–1187; cf. Cic. N.D. 1, 53; 3, 25; Bailey, op. cit., 15.

[149] 5, 1204–1210. Cf. the famous line of Petronius (frg. xxvii, 1 Bücheler; repeated by Statius, Theb. 3, 661): *primus in orbe deos fecit timor*; Serv. Aen. 2, 715: *conexa enim sunt timor et religio.*

[150] 5, 156–186. Similar arguments appear in Cic. N.D. 1, 19–23.

[151] 4, 823–857. [152] 5, 195–323; also 2, 181.

Epicurean arguments, as Bignone has emphasized,[153] seem in origin an attempt to refute the astral theology of Aristotle in his De Philosophia.

But the Stoics were not convinced, and other expressions of their views continue to be frequently found. Weather signs were appointed by deity for our use, as Virgil says.[154] Manilius, consistently with his type of determinism, cannot believe the universe to be created [155] or maintained [156] by chance. Seneca's sense of awe is aroused, not merely by the *sacer inter nos spiritus*, but also by the sight of the variety and beauties of nature,[157] and his sense of the divine kindness is stirred by the obvious advantages which man finds ready to his hand upon the earth.[158] If we say that these come to us by nature rather than from God we are but changing our terminology, "for what else is nature than God and the divine reason inherent in the universe as a whole and in all its parts?" [159] And the first book of Seneca's Dialogues is an attempt to answer the question of his friend Lucilius why the righteous so often suffer. No real evil, he asserts, can come to a good man, for contraries do not admit of mixture.[160] Though this may seem an answer less acceptable to the rank and file of imperfect humanity than to those moral aristocrats from whom Stoicism was largely recruited, yet it is obviously on a far higher and more impregnable level than Lucilius Balbus's defence in Cicero that the gods, like kings, deal only with large matters and not with details. Epictetus, though chiefly concerned with ethical matters, yet recognizes that a

[153] E. Bignone, L'Aristotele perduto e la formazione filosofica di Epicuro, 2 (1936), 335–391; id. in Ann. d. r. Scuola norm. sup. di Pisa, Ser. 2, 3 (1934), 289–330; especially 315.

[154] Georg. 1, 351–355. Cf. E. Pfeiffer, Stud. z. ant. Sternglauben (1916), 73, n. 1.

[155] 1, 492–494.

[156] 1, 530. Manilius may also be cited for the doctrine of the microcosm (4, 893–895): *quid mirum, noscere mundum/ si possunt homines, quibus est et mundus in ipsis/ exemplumque dei quisque est in imagine parva*; cf. W. R. Halliday, The Pagan Background of early Christianity (1925), 161, n. 1.

[157] Ep. 41. Cf. N.Q. 2, 45, 1–3, where he speaks of the *rectorem custodemque universi, animum ac spiritum mundi, operis huius dominum et artificem*, which may equally well be called *fatum* or *providentia* or *natura* or *mundus*.

[158] De Ben. 4, 6, 1–6; 4, 23, 1–4.

[159] De Ben. 4, 7, 1.

[160] Dial. 1, 2, 1.

finished work is the product of an artificer and not of chance,[161] and that a close sympathy underlies macrocosm and microcosm alike.[162] Plutarch has less to say on this subject than one might expect, yet he does praise the view [163] that nature makes all things for some end. Maximus of Tyre, in the second century, remarks [164] that if we cannot see the Creator himself we may see his many and varied works, not blaming him for individual defects, but, as in the work of an earthly artist, praising the entire result.[165] Nature, he says, is blamed for having made man naked and defenceless at birth, yet she has given him an intellect to prepare himself defences far surpassing those of the brutes [166] — an argument already used by Dio Chrysostom [167] and ultimately deriving from Aristotle's answer to Protagoras already mentioned.[168]

The eclectic Apuleius in his Apologia [169] shows acquaintance with the cosmology of the Timaeus and its doctrine of the divine planning of the human physiology. In the work De Mundo [170] the cosmos and its order are noted, as is the long and widely established belief [171] in its divine origin, while its governance by deity is compared,[172] in forms now very familiar, to that of a ship by its pilot, a chariot by its driver, a city by its law, and an army by its general. His first book On Plato follows largely the Timaeus, with much on the apt arrangement of the human physiology.[173] On the opposing side and also in the second century is Sextus Empiricus, who in his first book Against the Physicists discusses the existence of the gods, recognizing that Epicurus had openly admitted it yet in esoteric expositions of the nature of things had in essence denied it,[174] while the sceptics, because of the balance of arguments, had suspended judgment.[175] It is in general, then, the Stoics who support the gods,

[161] 1, 6, 7.
[162] 1, 14, 4.
[163] De Soll. Anim. 3, 960 e.
[164] 11, 12 Hobein.
[165] 41, 4 Hobein.
[166] 31, 4 Hobein.
[167] Or. 6, 26–29.
[168] Cf. n. 19 supra.
[169] Ch. 49.
[170] 22.
[171] 24. On the cosmos see also Ps.-Apul. Ascl. 10; 13; 36–37.
[172] 35; and, for the army, especially 30.
[173] E.g., 1, 14–17.
[174] Adv. Phys. 1, 58.
[175] 1, 59.

and by four arguments, of which the second is that derived from the orderly arrangement of the universe,[176] which Sextus proceeds to set forth,[177] in terms very similar to those in the second and third books of Cicero's De Natura Deorum, yet not derived from them but from a common and more fully documented source than Cicero.[178] Throughout this section one has the feeling that Sextus is more sympathetic with the Stoic view of the order of nature than with the (rather feeble) attacks which generally fail to touch its main contentions, yet the antidogmatic tenor of his whole work makes him noncommittal in his decision.

Such undermining of empirical belief helped to set the stage for Neoplatonism,[179] and Plotinus himself, though perhaps not greatly impressed by what we might call scientific phenomena, when he writes [180] against those Gnostics who maintain that the Creator is evil, recognizes [181] that one might be impressed by the sun and the beauty of the cosmos, but bids such an one turn his attention rather to its archetype and that pure intelligence and infinite wisdom which rules these things. A somewhat similar idea appears in the Life of Pythagoras by Iamblichus.[182] Porphyry [182a] says that some consider man a μικρὸς διάκοσμος, and Plotinus [182b] had implied the same of animals in general. Sallustius, in his work On the Gods and the Universe,[183] condescends to employ some of the stock arguments, such as those from the

[176] 1, 60.

[177] 1, 75–122.

[178] E.g., a refutation given in N.D. 3, 23 on the authority only of the speaker Cotta is in Sextus (Adv. Phys. 1, 108) ascribed to Zeno's contemporary, the Megarian philosopher Alexinus.

[179] Cf. A. Harnack in Encycl. Brit.[11] 19 (1911), 373.

[180] Enn. 2, 9, 16; cf. A. Drews, Plotin (1907), 182–184.

[181] Enn. 5, 1, 4, pp. 484–485. The work of A. H. Armstrong, "The Architecture of the intelligible Universe in the Philosophy of Plotinus" (Cambr. Class. Stud. 6 [1940]) I have not yet seen.

[182] Ch. 12. For the use of the doctrine of the world-pattern, passing from Plato (Tim. 28 a–c) and Philo through Origen and the Neoplatonists to Augustine, cf. F. E. Robbins, The Hexaemeral Literature (1912), 86; C. Bonner, Homily on the Passion by Melito Bishop of Sardis (Studies and Documents, 12 [1940]), 68–69, citing Philo, De Opif. Mundi, 17–18; De Vita Mosis, 2, 11; Nicom. Arith. Introd. 1, 4, 2.

[182a] Ap. Stob. Ecl. 3, 21, 27.

[182b] Enn. 4, 3, 10.

[183] Ch. 9.

structure of the eye, the position of the nose, and the shape of the teeth, and also maintains that universal order must come from something which sets it in order.

Some writers in other fields are not without traces of the doctrine under discussion. The Stoically inclined [184] Strabo [185] finds in the convenient geographic arrangements of Gaul an indication that it was laid out by Providence rather than by chance. In another passage [186] he distinguishes the work of nature, which makes all things converge on a centre according to specific gravity, from that of Providence, which begets living things, arranges the details of the earth, and assigns abodes to gods and men. It is not surprising that Vitruvius,[187] who constantly glorifies the profession of architecture, should describe the power of nature as the architect of the universe. Quintilian [188] asserts that geometrical calculations of the courses of the stars reveal to us that nothing is without order or by chance — "a consideration," he observes, "which may at times be of value to an orator." [189] The Elder Pliny [190] remarks on the appropriateness of the terms cosmos and *mundus*, and recognizes [191] that nothing is produced by nature without some hidden cause. And at a far later date (S. V) that other encyclopaedist, Martianus Capella,[192] embroiders with the more baroque language of his day the vision of Aristotle's De Philosophia.

[184] Strab. 1, 2, 3; 1, 2, 34.

[185] 4, 1, 14. Similarly Aristides (Orat. 48, pp. 488–489 Dind.) asserts that the Nile overflows in summer because of the providence of the gods for the good of Egypt.

[186] 17, 1, 36.

[187] 9, 1, 2: *architectata est.*

[188] Inst. 1, 10, 46.

[189] Cf. the appeals made to deity by the modern politician.

[190] N.H. 2, 8.

[191] 22, 1.

[192] 2, 200–204. A curious passage — called to my notice by Professor A. D. Nock — in Philo Byzantius (De septem Orbis Spectaculis 3, p. 12 Orelli), as emended by Leo Allatius (see p. 94 of Orelli's ed.), declares that nature produced elephants so that Phidias might use the ivory from their tusks in his sculpture! This may be merely fulsome rhetoric, but it almost suggests the parody in Voltaire, Candide, 1 (the remarks of Pangloss): *Remarquez bien que les nez ont été faits pour porter des lunettes; aussi avons-nous des lunettes . . . les pierres ont été formées pour être taillées et pour en faire des châteaux . . . et les cochons étant fait pour être mangés* (cf. n. 101 supra), *nous mangeons du porc toute l'année.* (This passage I owe to Professor E. K. Rand.)

In one technical field in particular, that of medicine, the part played by teleology is naturally large, since medical men were above all others concerned to see that impaired bodily powers were restored to the uses for which they had been originally designed, whether by nature or by God. Galen [193] most of all, and among his voluminous works especially in the De Usu Partium, abounds in apposite illustrations, of which I can here cite but a few. We should not admire the beauty and regularity of the heavenly bodies to such an extent as to be inattentive to the equal wisdom and providence displayed in the smaller objects of creation.[194] From the construction of the creature one can understand the wisdom of the Creator, and the careful study of anatomy is of even more significance to the philosophical student of nature as a whole than it is to the medical practitioner.[195] And it is not merely at creation but also — as my colleague Werner Jaeger has called to my attention — at the curative power of nature in dealing with pathological states that we should feel wonder.[196] For, after all, Providence is concerned with maintaining as well as with fashioning its creatures, as is shown by a passage [197] to which Theiler [198] has well called attention, in which Galen praises the provisions of the Creator that the eyelashes, to perform their proper functions, should keep always their appointed length and thickness. Epicurean critics had tried to weaken belief in design by implying that the human body resulted from purposeless chance rather than purposeful

[193] Cf. Theiler, op. cit., 103–104.

[194] De Usu Part. 3, 10 (3, p. 238 K.). Cf. also De Foetuum Format. 6 (4, pp. 695–697 K.); [Galen], Hist. Philos. 34 (Doxogr. Gr.² 617), with which cf. Aët., 1, 6, 2–9 (Doxogr. Gr.² 293–295).

[195] De Usu Part. 17, 1 (4, pp. 360–361 K.). On the close relations of physicians and philosophers note his book (1, pp. 53–63 K) *ὅτι ἄριστος ἰατρὸς καὶ φιλόσοφος*. For many other illustrations of this commonplace in various authors see R. Hoyer, Die Heilslehre (1897), chap. 1, especially p. 18.

[196] Ars medica 29 (1, p. 385 K.); 32 (1, p. 390 K.). For this same conception in Hippocrates cf. W. A. Heidel in Proc. Amer. Acad. of Arts and Sciences 45 (1910), 106, n. 109. On p. 106 Heidel collects Hippocratean instances of the personification of nature in its arrangement of details in the human organism. But cf. Heidel, p. 93, n. 59. In the Hippocratic treatise De Corde (21, p. 488 K.) the ear is described as *τὸ ποίημα χειρώνακτος ἀγαθοῦ*.

[197] De Usu Part. 11, 14 (3, p. 905 K.).

[198] Op. cit., 104.

Providence, but Galen in reply constantly insists that chance is not the cause and that physiological details are arranged in the best possible way.[199]

The Hermetic Corpus also shows the influence of this doctrine. In one important passage [200] the wish is expressed that from a bird's-eye view of heaven, earth, sea, rivers, air, fire, and stars we might be led to behold in all that moves Him who is unmoved, and Him who is hidden made manifest through His works. The Creator has made eyes, nose, ears, mouth, nerves, veins, bones, skin, fingers and joints, heart, lungs, and the rest, and just as a statue or a painting is not without an artist so the universe is not without a maker. In another passage [201] we are told that the cosmos, planets, earth, and living things were all created, and all form one system, which implies one maker, who can be no other than God. God, therefore, is one, and by Him all things were made. Again,[202] if God does not make all things it must be because He disdains to do so or because He cannot, and this is impious to assert. Another passage [203] declares that the Creator makes things in order that through them He may himself be seen [204] by men; still another [205] likens God to a skilled charioteer of the cosmos. Finally,[206] the evil in the world is due to matter not yet brought into order by the Creator; it is the survival of the primeval chaos upon which the master will in due time impose order.

Aristotle's De Philosophia apparently made a strong impression upon that interesting eclectic, Philo, who so remarkably attempted to reconcile Platonism, Stoicism, and other forms of Greek philosophy with his own Jewish background, for more than one passage in his works shows its clear influence.[207] Thus,

[199] Cf. De Usu Part. 1, 8 (3, p. 17 K.).

[200] 5, 5–8. Part of this passage seems to be used by Lact. Inst. 2, 10, 14. Both it and the next W. Scott would date about the third century.

[201] 11 (ii), 6 b–14 b.

[202] 14, 8.

[203] 14, 3.

[204] Reading, with Scott, [*a*]*ὁρατός*.

[205] 16, 7.

[206] 5, 4.

[207] Legg. All. 3, 97–99; De spec. Legg. 3, 187–189; cf. De Abr. 159. A curious comparison of Mosaic theories of creation with those of Greek philosophers is also to be found in Galen, De Usu Part. 11, 14 (3, p. 905 K.).

the world is like a city, whose order and beauty leads us to a belief in its architect, the demiurge.[208] Abraham sees a charioteer and pilot presiding over the world [209] (Josephus [210] similarly asserts that Abraham had inferred from phenomena upon the earth and in the heavens the existence of a controlling deity). The meteorologist, says Philo, sees nothing greater than the universe, but the more discerning wise man beholds something yet more perfect, perceived by mind alone, and governing and piloting all things.[211] Microcosm and macrocosm appear in Philo's succinct statement [212] that some think man a small world and the world a great man. An important landmark in our investigation is found in Philo's work De Opificio Mundi, which seems the first of those writings — later very common in Christian literature — which united the Mosaic tradition of the creation with the cosmological theories of the Greeks, and which form an impressive series from Philo to Paradise Lost. Philo's teleological view of nature is not without suggestions in Hebrew thought, notably in the Nineteenth Psalm, from which my title is drawn,[212a] or in that striking passage in which Job [213] says: "But ask now the beasts, and they shall teach thee; and the fowls of the air, and they shall tell thee; or speak to the earth, and it shall teach thee; and the fishes of the sea shall declare unto thee. Who knoweth not in all these, that the hand of the

[208] De Praem. et Poen. 41–42. Cf. De spec. Legg. 1, 33–35.

[209] De Abr. 70.

[210] Ant. 1, 155–156.

[211] De Abr. 84.

[212] Quis Rer. div. Heres 155. W. W. Jaeger, Nemesios von Emesa (1914), 135, compares Philo, De Opif. Mundi 27: *ἄνθρωπον . . . βραχύν, εἰ δεῖ τἀληθὲς εἰπεῖν, οὐρανόν*; also Macrob. Somn. Scip. 2, 12, 11: *ideo physici mundum magnum hominem et hominem brevem mundum esse dixerunt.*

[212a] Cf. also Ps. 8, 3–8, on the subjection of the brute creation to man; and Psalms 65, and 104. C. A. and E. G. Briggs, Crit. and exeg. Comm. on the Book of Psalms, 1 (1906), 164, put the original form of the first half of Ps. 19 (through verse 6) in the Babylonian period, in an age of sun-worship, and the second half — in praise of the divine Law — not earlier than the Greek period, but do not suggest the appearance of teleology in it. The clearly teleological intent, as well as the allusion in verse 5 to the strong man running a race — an Hellenic touch pointed out to me by Professor W. H. P. Hatch —, raise in my mind the question whether the first half, as well as the second, does not date from the Greek period and present a thought of Greek derivation rather than an independent Hebrew idea.

[213] 12, 7–9.

Lord hath wrought this?" Or, again, a noteworthy passage in the Wisdom of Solomon,[214] which concludes: "For by the greatness and beauty of the creatures proportionably the maker of them is seen" — a logical expression of what in the Benedicite Opera Omnia or the hymn in the thirteenth book of the Hermetic Corpus [215] is uttered in a lyrical form.

Such a thought as that quoted from the Wisdom of Solomon agrees with the remark of St. Paul in Romans [216] that "The invisible things of him from the creation of the world are clearly seen, being understood by the things that are made, even his eternal power and Godhead," and with this utterance I pass to the next stage in our story, namely the whole-hearted adoption by Christian writers of the growing mass of teleological observation and theory. The word *cosmos* is often used in the New Testament,[217] especially in the Fourth Gospel, in various senses, but apparently without particular allusion to the argument from order and design. One of our most significant early Christian passages is in I Clement,[218] where the writer enumerates the Creator's works in the courses of the stars, day and night, earth and sea, seasons and winds and springs. Yet this is but a passing allusion; serious use begins with the apologists of the second and succeeding centuries. In Greek Theophilus of Antioch, in his work addressed to the unbeliever Autolycus,[219] and Athenagoras in his apologetic called The Embassy,[220] addressed to M. Aurelius and Commodus, have brief but definite chapters upon the theistic evidence based upon design, but far

[214] 13, 1–5. I. Heinemann, Posidonios' metaphys. Schriften, 1 (1921), 136–153, has indicated the Protrepticus of Posidonius as an important source for the Wisdom of Solomon. If that be the case we probably have here, as perhaps in the other Biblical passages, a reflection of Greek ideas.

[215] Corp. Herm. 13, 17–20 (perhaps of the third century of our era); and cf. other parallels cited by W. Scott ad loc.

[216] 1, 20.

[217] F. Pfister, Der Reliquienkult i. Altertum, 1 (1909), 247, n. 900 (after H. J. Holtzmann's commentary on John[2] [1893], 7) observes that κόσμος occurs 15 times in the Synoptic Gospels but 78 times in John, and remarks: "Denn aus der Uebertragung der Logoslehre auf den Messias musste der Universalismus folgen, der die Weltbestimmung des Christentums fordert."

[218] 20, 1–11.

[219] Ad Autol. 1, 6.

[220] Ch. 4.

more detailed is the charming dialogue of Minucius Felix, in which he has imitated Cicero's De Natura Deorum as closely as Virgil's Eclogues echo Theocritus, and in which the teleological argument has clear recognition.[221] Tertullian, in his polemic against Marcion,[222] expresses his wonder at the divine workmanship in the structure and activities of the insects, and in his Apologeticus [223] hints at the marvels of the cosmos, as does Clement of Alexandria in the Protrepticus [224] and the Stromata.[225] Arnobius [226] challenges the pagans to explain any better than the Christians the purpose of the creation of many of the plants and animals with which man is confronted. Dionysius, bishop of Alexandria, refutes, with eloquence and in detail,[227] the view of the Epicureans that the universe is the result of chance, first, by analogies from daily life — the cloak implying a weaver, the house, city, or ship a builder —, second, by the regular constitution of the universe, and thirdly, by the human physiology, which, he says, has so impressed certain medical men that they have been led to deify nature itself.[228] Origen in the De Principiis finds [229] the artistic plan of a providential ruler less evident in those matters belonging to the earth than in those affecting the heavenly bodies and not so clear in human occurrences as in the minds and bodies of the brutes. Against the philosopher Celsus, whom Origen describes as an Epicurean,[230] and who had maintained that chance was an adequate explanation of earthly and celestial phenomena,[231] Origen openly allies himself with the Stoics,[232] asserting that the skill shown in the creation of animals must proceed from the highest intelligence. Against the argument [233] that if God had created the products of the earth for the sake of man he would not have made man have to work so hard to secure them he replies that

[221] E.g., 17, 4—18, 5.

[222] 1, 14.

[223] On the vexed question whether this work or that of Minucius Felix is the earlier — which Harnack thought hopeless of solution — cf. P. de Labriolle in Rev. de Philol. 62 (1936), 92.

[224] 10, 98, 2.

[225] 5, 14, 99, 3.

[226] 2, 58–59.

[227] Ap. Eus. Pr. Ev. 14, 23–27.

[228] Ap. Eus. Pr. Ev. 14, 26.

[229] 4, 7.

[230] E.g., C. Cels. 4, 54; 4, 75.

[231] Ibid.

[232] C. Cels. 4, 54.

[233] 4, 76.

God intended that man's needy condition should compel him to protect and maintain himself by discovering the arts of husbandry, carpentry, weaving, and navigation. "What greater injury can befall a man," he asks,[234] "than that he should be unable amidst the order of the world to see Him who made it?"

The works of Lactantius are permeated by the thought of divine design. Frankly aligning himself [235] with the Stoics in thinking the universe made for man, he asserts [236] that in this they agree with Holy Scripture. He largely relies upon Cicero [237] for his illustrations, especially for those from physiology,[238] and for much of his argument, and finds his especial foes in the Epicureans. That the world was made by chance he repeatedly denies; [239] it is wrong to think it made by nature unless nature be the same as God, and if so why not call it God? [240] To the inquiry of Epicurus why, if God made man, he made him mortal,[241] he gives a two-fold reply, first, that man is made of matter, which is fragile,[242] and second, that his spirit — the essential part of him — acquires immortality by virtue [243] and by distinction between the evil and the good.[244] If the sense-organs were not designed for a purpose but merely later used for such,[245] then why are not men also able, by the chance processes of the atoms, to hear with their nostrils, smell with their eyes, and see with their ears? [246] If man is born naked and unarmed it is in order that by developing his *ingenium* rather than automatically — like the brutes — he may clothe and defend himself.[247]

Upon the introduction of this argument into those curious Christian romances known as the Clementines,[248] or its presence

[234] 8, 38; cf. 8, 52. [235] De Ira 13, 1. [236] Inst. 7, 7, 9.

[237] Cf. the elaborate comparisons in F. Fessler, Benutzung d. philos. Schriften Ciceros durch Lactanz (1913), especially 43–54 (though some good parallels are overlooked).

[238] E.g., De Opif. 8.

[239] E.g., De Opif. 2, 10; 6, 12; De Ira 10, 26.

[240] Inst. 3, 28, 4–5; cf. [Clem.] Recogn. 8, 20.

[241] Epic. frg. 371 Usener, ap. Inst. 7, 5, 7. Cf. K. Gronau, Poseidonios u. d. jüdisch-christliche Genesisexegese (1914), 153–154.

[242] Inst. 7, 5, 14. [243] Inst. 7, 5, 15. [244] Inst. 7, 5, 20.

[245] Cf. Lucr. 4, 823–857. [246] De Opif. 6, 7–15. [247] De Opif. 2, 6.

[248] E.g., Recogn. 8, 16–34; 8, 42–44; Hom. 3, 34–36; 6, 25.

in the Praeparatio Evangelica of Eusebius [249] I cannot linger, since I must pass to that large set of writings known as the Hexaemera, or commentaries on the six days of the Mosaic account of creation. As Philo had combined Mosaic and Hellenic materials from a Jewish point of view, so these documents made the corresponding Christian combination. In the work of Theophilus to Autolycus already mentioned and in Hippolytus, who, according to Jerome,[250] wrote a Hexaemeron later used by Ambrose, we see early representatives of this type,[251] which seems now intended less as apologetic than as exegetic in character — an indication that the chief enemies of Christianity were no longer the pagans but those actual or potential schismatics and heretics within the fold who needed a more careful grounding in the tenets of their own faith. Central among these works is the Hexaemeron of Basil, which has gathered into itself much of the lore of the subject, and by which most subsequent writings in this field were influenced. This collection of sermons was delivered extemporaneously in the morning or evening [252] before an audience apparently enthusiastically interested in their scientific as well as in their theological content.[253] Their philosophical source has by some been supposed to be the curious collection known as the Physiologus,[254] but many of the illustrations are drawn from Plato's Timaeus,[255] while others are due to Aristotle, so that the view already expressed [256] that these and similar materials in later writers [257] were amassed, at least in considerable part,[258] by Posidonius, is perhaps not un-

[249] Pr. Ev. 6, 6, p. 251 a; 7, 3, p. 301 d; 7, 10, p. 314 d; 14, 24–25, pp. 773 d–778 b (from Dionysius of Alexandria, De Natura).

[250] Vir. ill. 61; Ep. 84, 7, 6.

[251] Cf. F. E. Robbins, The Hexaemeral Literature (1912), 36–41, who points out (p. 36) the lack of any complete extant work of this sort between Philo and Basil.

[252] Cf. L. Thorndike, Hist. of Magic and exp. Science, 1 (1929), 482.

[253] Thorndike, op. cit., 1, 485–486.

[254] Robbins, op. cit., 51.

[255] Cf. T. L. Shear, The Influence of Plato on St. Basil (1906).

[256] Note 119 supra.

[257] Robbins, op. cit., 51, mentions Aelian, who may well, however, have drawn from such a source as Posidonius. Basil was learnedly used by Ioannes Philoponus (S. VI) in his De Opificio Mundi.

[258] Cf. P. Shorey in Class. Phil. 10 (1915), 486, for doubts expressed.

reasonable, in view of such studies as those of Jaeger [259] and Gronau.[260] This position, however, of Posidonius as a collector and transmitter of ideas gathered from many sources — Presocratic, Platonic, Aristotelian, and Stoic — necessitates caution in claiming as essentially Stoic all the doctrines expressed by him or by those who may have borrowed from him.[261] Basil has less than one might expect upon human physiology, but his brother, Gregory of Nyssa, supplied that work in his De Opificio Hominis [262] and in his Hexaemeros further developed some points left incomplete by Basil at his death.[263] His admiration for Basil's work may be seen in his statement,[264] "When I handle his Hexaemeron . . . I am in the company of the Creator and learn the theory of creation, and admire the Creator more than before, when I had only my sight as my teacher."

In this same fourth century the Hexaemeron of Ambrose is heavily dependent upon that of Basil, yet it was itself of considerable influence in spreading the ideas of Basil in the West,[265] where, however, many of the scientific illustrations adduced were already familiar from Cicero, Minucius, Tertullian, and Lactantius.[266] Other later writers of this type, discussed by F. E. Robbins in his study of the Hexaemeral literature, I need not here mention.[267] Jerome, busy with textual and dogmatic matters, has little which bears upon this theme, save the remark [268] that from the regularity of the stars some philosophers have suspected a providence in things celestial but an indiffer-

[259] Nemesios von Emesa (1914), 68–137.

[260] Poseidonios u. d. jüdisch-christliche Genesisexegese (1914), 293–304.

[261] H. F. Cherniss, The Platonism of Gregory of Nyssa (1930), 58, makes this point very forcibly in criticism of Gronau, and remarks (p. 76) that no Stoic could have surpassed Plato's Timaeus in defending a teleological attitude toward man and the universe.

[262] Cf. Robbins, op. cit., 52; Gronau, op. cit., 141.

[263] Gronau, op. cit., 112; Cherniss, op. cit., 25.

[264] Or. 43, 67. My colleague, Professor F. N. Robinson, calls to my attention an interesting parallel to this thought in Anth. Pal. 9, 577.

[265] Cf. Robbins, op. cit., 58. Ambrose's De Noe also contains apposite matter.

[266] Cf. E. Pfeiffer, Stud. z. ant. Sternglauben (1916), 73, n. 1, who thinks the Latin fathers mainly depend on Cic. N.D. 2, 133 ff. or — as in the case of Lactantius — on Varro's Logistoricus, Tubero, De Origine humana, the Greek fathers on Xenophon, Plato's Timaeus, and Stoic sources.

[267] See his lists on pp. 93–104.

[268] In Ezech. 3, p. 88 Vall.

ence to things earthly, since on this planet there is neither justice nor order. (This belief, rather frequently recurring, perhaps derives from the Pythagorean Philolaus.[269]) In three places,[270] moreover, Jerome defends divine providence for having created vipers, crocodiles, and vermin, but otherwise his allusions are but slight. The date [271] and sources [272] of Nemesius, bishop of Emesa's, work On The Nature of Man have been studied in detail, particularly by Werner Jaeger, and the book is found to show much of the traditional material, apparently deriving, directly or indirectly from Posidonius's commentary on the Timaeus.

That commanding intellect, Augustine, introduces the teleological motive at perhaps as many as fifty places in his voluminous works. God is a lover of order,[273] as in Plato,[274] though from our lack of vision of the whole we sometimes fail to see that order; [275] as we could not fairly judge a mosaic from looking only at single blocks in it,[276] so with the universe. Where we *do* recognize measure, number, and order, we should ascribe it to God as *artifex*.[277] Several passages [278] recall the vision of the emerging cave-dwellers in Aristotle, and one of these [279] becomes lengthy and at points almost lyric.[280] But the maker is superior to his product; [281] though heaven is fair its maker is more so, even though our eyes be too dull to behold him; [282] we

[269] J. B. Mayor on Cic. N.D. 2, 56.

[270] Adv. Iovin. 2, 6; In Is. 7, p. 285 Vall.; In Ioel, p. 198 Vall.

[271] W. W. Jaeger, Nemesios von Emesa (1914), 3, thinks perhaps in the last quarter of the fourth century.

[272] Jaeger's work is devoted to this question and finds the sources largely in Posidonius; cf. also for other views Christ-Schmidt-Stählin, Gesch. d. gr. Lit.[6] 2, 2 (1924), 1488, n. 9; P. Shorey in Class. Phil. 18 (1923), 91.

[273] De Ordine 1, 17.

[274] Tim. 30 a.

[275] De Ordine 2, 11.

[276] De Ordine 1, 2.

[277] De lib. Arbitr. 2, 54; De Gen. c. Manich. 1, 26.

[278] De vera Relig. 52; Enarr. in Ps. 41, 7; 76, 14; 99, 5; 103 serm. 4, 2; Sermones 241, 2; also C.D. 7, 30.

[279] C.D. 22, 24.

[280] The poem De Pulchritudine Mundi in Patr. Lat. 40, 729–730 is not by Augustine himself.

[281] Enarr. in Ps. 149, 13.

[282] Enarr. in Ps. 85, 9.

should marvel at the works but love their maker.[283] We desire that our dear ones should not be amazed at the works of men but lift their attention to those of the Creator.[284] The great *artifex* has first produced in his mind the more perfect forms of beauty and then in his creatures the lesser ones.[285] Augustine is naturally opposed to the atomic chance of the Epicureans.[286] Ignorant men in a workshop, he says, fail to understand the purpose of all the equipment; so we in the universe, but the *artifex* knows why, even though I do not.[287] He frankly admits that he does not know why frogs and vermin were made,[288] yet reasons that all animals are either useful to man (in which case their purpose seems obvious), or harmful (in which case they are probably intended to punish or to exercise man),[289] or merely superfluous (about which we need not inquire). The structure of the smallest insects, however, is as wonderful as that of the largest organisms,[290] and the same God made the angel in heaven and the worm in the ground.[291] Yet God's creation of man is more remarkable than that of the beasts,[292] since he possesses reason, which has invented the varied arts,[293] and since he was made in that upright posture [294] which so many previous writers have praised. God has created all things for man's sake,[295] but man's faults are not properly considered the responsibility of God.[296] Here we may perhaps see an attack upon the Manichaean heresy, which emphasized the evil side of the products of an evil creative power — a heresy to which Augustine in his youth had inclined but which he later assailed. In

[283] Enarr. in Ps. 145, 5; cf. 103, serm. 1, 1; also Sermones 68, 2.
[284] De catechiz. Rudibus 12, 17.
[285] De div. Quaest. 45, 1.
[286] Ep. 118, 31 (a letter with many parallels to Cic. N.D.).
[287] Enarr. in Ps. 148, 12.
[288] De Gen. c. Manich. 1, 26; De Gen. ad Litt. 3, 26.
[289] Even vermin may be of use to stimulate men; De Ordine 1, 14.
[290] C.D. 11, 22; De Ordine 1, 2.
[291] Enarr. in Ps. 148, 10; cf. C.D. 22, 24; Sermones 243, 7.
[292] Ep. 166, 15.
[293] De Ordine 2, 35–37.
[294] De div. Quaest. 50, 3.
[295] De div. Quaest. 30. So harmful plants are due to man's sin, not to God's creation; De Gen. c. Manich. 1, 19; De Gen. ad Litt. 3, 28.
[296] Op. imp. c. Iulianum 5, 11.

this brief anthology of some of his characteristic utterances we find the positive influence of the Old Testament, Plato, Stoicism, and Neoplatonism,[297] as well as the recognition of Epicurean, Manichaean, and other objections. These are fused together into a whole in which the interest is naturally theistic rather than physical,[298] yet the fact remains that, here as in other writers, to graft Greek astronomical and biological science upon a Hebrew creation-story demanded allegorical interpretations which could hardly prove universally convincing.

In the hasty sketch just given I have attempted to describe the use of the teleological argument by some of the greatest figures of Greek and Roman philosophy, and its adoption by other thinkers of wide influence in Jewish and Christian thought. The recital naturally does not end with Augustine, but might be pursued through the Middle Ages [299] into modern times. From the late seventeenth to the early nineteenth century the doctrine particularly flourished, in such men as Ralph Cudworth,[299a] John Ray,[300] William Derham,[301] Samuel Clarke,[302] Bernard Nieuwentyt,[303] William Paley,[304] and the authors of the famous Bridgewater Treatises.[305] In a parallel development, scientists, from Francis Bacon [306] and René Descartes — the latter a real founder of the mechanistic theory of the vital processes [306a] — to the mechanists of the present day, have thrust back the boundaries of the unknown, and tried to reduce all

[297] Cf. the summary of the Hexaemeral writers by Robbins, op. cit., 23; 64–72.

[298] Cf. Robbins, op. cit., 64.

[299] L. E. Hicks, A Critique of Design Arguments (1883), 74, thinks that there was little during this period, when ecclesiastical writers drew chiefly upon Scripture. Further historical notes, however, on this period may be found in his book.

[299a] The true intellectual System of the Universe (1678).

[300] The Wisdom of God manifested in the Works of the Creation (1691).

[301] Physico-theology (1713); Astro-theology (1719).

[302] Evidences of Natural and Revealed Religion (1705) — eight sermons preached at St. Paul's, London.

[303] His work was translated and published in English in 1718 under the title of The Religious Philosopher.

[304] A View of the Evidences of Christianity (1794); Natural Theology (1802).

[305] Published from 1833 to 1840.

[306] Cf. L. J. Henderson, The Order of Nature (1925), 23–25, for Bacon's attempt in his Advancement of Learning to separate metaphysical considerations from physical researches, in which one should proceed as if there were no final cause.

[306a] Yet cf. L. J. Henderson, The Fitness of the Environment (1924), 284.

phenomena to known physical laws, the psychologist satisfied if he can explain them upon biological grounds, the biologist similarly explaining by physical or chemical principles, and the physicists and chemists laying their problem eventually in the laps of the mathematicians. Room might still, however, be left for teleology, even for Descartes [307] and Leibniz,[308] for purpose may originally have determined the direction of events, even though each subsequent occurrence be mechanically ordered. Charles Darwin,[309] for example, could not conceive of the universe as the result of blind chance or of necessity, and, looking for a first cause, felt himself to be well-nigh a theist. Yet querying whether a mind like man's, evolved from that of primitive animals, could be trusted to draw such general conclusions he remained an agnostic.[310] Among more recent scientists some who are most critical of conventional theistic views yet recognize the difficulty in originally creating and starting the celestial and the human machines.[311]

It is not the function of this platform to argue the question here considered, nor of an audience brought together under philological auspices to act as its judges. Yet I believe, as I think you do also, that no idea deeply studied and long debated by ancient thinkers lies outside our purview, if we approach it as the history of man's thought rather than as the subject of contemporary polemic. The fragmentary remains and the limited time at my disposal have prevented a more comprehensive treatment of the cosmic order, whether exhibited in

[307] Cf. Henderson, Order of Nature, 31.

[308] Id., 34.

[309] Life and Letters, 1 (1888), 312–313 (quoted by Henderson, op. cit., 207). On the design argument as affected by the theory of evolution cf. F. J. E. Woodbridge, Nature and Mind (1937), 29–36.

[310] Henderson, op. cit., 208, thinks this essentially the position of David Hume.

[311] E.g., Henderson, op. cit., 192, concludes that the remarkable properties of certain elements, especially hydrogen, carbon, and oxygen, must for the present be regarded as possessing a teleological character. And the late Hans Zinsser remarks (in the Atlantic Monthly, 154 [1934], 535, n. 1): "As Paley rightly asserts, mechanism presupposes God as the mechanician. This is the difficulty faced by all the recent astronomical and physical school of ponderers." Cf. also — among many similar utterances — Lord Kelvin, Nineteenth Century, 90 (1921), 173; H. F. Osborn, The Earth speaks to Bryan (1925), 65; 90. The opinions of various modern scientists and philosophers are cited by W. H. Johnson in Harv. Theol. Rev. 12 (1919), 315–328.

whirling worlds or in the thickness of the human eyelash. These are "but broken lights" of deity, as Tennyson would say. Yet, in scanning them in a series and reflecting upon them as a whole, one becomes more conscious of the march of thought of earnest and sincere searchers, from Diogenes of Apollonia to Charles Darwin. And, that our studies may not remain unfruitfully academic, in an age of confusion, like the present, it is perhaps not without value to have recalled for a little time that need for a harmony between the microcosm and the macrocosm so well expressed in the glowing lines of Boethius: [312]

O felix hominum genus,
Si vestros animos amor
Quo caelum regitur regat.

[312] Consol. 2, 8, lines 28–30.

SIMON ALCOK ON EXPANDING THE SERMON

MARY FUERTES BOYNTON

TRUMANSBURG, N. Y.

'THE foundation in the thirteenth century of the two great orders of Franciscans and Dominicans, the latter *par excellence* the *ordo praedicatorum*, gave an enormous impulse to preaching.'[1] It was largely responsible for the abundant production of sermons and arts of sermon-making in the centuries that follow. More than two hundred manuscripts of the period from 1200 to 1500 contain arts of preaching, *artes praedicandi*.[2] Some have been traditionally associated with the names of certain great Churchmen and Schoolmen, St. Bonaventure, St. Thomas, Albert the Great; we have the names of nineteen authors in the thirteenth century, thirty-six in the fourteenth, twenty-seven in the fifteenth, and as many more manuscripts are anonymous. A glance at Professor Caplan's list of authors on pages 38, 39, of his Hand-List will show that the great majority of known authors were members of an Order.

So far twenty-one of the tracts have been published, and many more have been studied by scholars who sought to determine their place and relations in the history of rhetoric and the history of the Church, or to use them as keys to open the meaning of the typically mediaeval thematic sermon.[3]

[1] T. F. Crane, The Exempla of Jacques de Vitry, London, 1890, p. xix.

[2] Harry Caplan, Mediaeval Artes Praedicandi, a Hand-List, Ithaca, 1934, and A Supplementary Hand-List, 1936; Th.-M. Charland, O. P., Artes Praedicandi, Ottawa, 1936.

[3] For published tracts, see Professor Caplan's Hand-List, pp. 36, 37, and Supplementary Hand-List, p. 27. Observe, that other than the tracts of Alain de Lille and Guibert de Nogent which are published by Migne in the Patrologia Latina, only six *arts* have been printed since the sixteenth century.

The following studies based on mediaeval arts of preaching should be consulted:

A. Lecoy de la Marche, La Chaire Française au Moyen Age, Paris, 1886.

Etienne Gilson, Michel Menot et la Technique du Sermon Médiéval, in Revue d'Histoire Franciscaine, July, 1925.

Harry Caplan, Invention in Some Mediaeval Tractates on Preaching, in Speculum, July, 1927.

The Four Senses of Scriptural Interpretation and the Mediaeval Theory of Preaching, in Speculum, July, 1929.

Classical Rhetoric and the Mediaeval Theory of Preaching, in Classical Philology, April, 1933.

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The arts differ greatly in length; many are fragments. They differ in kind also, but it is possible to make some few safe generalizations. On the whole they derive more from Aristotle's logical works, the Topics and Categories, than from classical rhetoric or the great Christian rhetoric of Augustine. They are concerned with invention and dilation, with the dividing, expanding, and decorating of a sermon on a theme already given. Some recommend a four-fold method of Scriptural interpretation; some advise the preacher on his audience's seven sins. They reveal a highly refined and thorough system in the art of making sermons.

The text of this fifteenth-century Latin Art of Preaching by the Englishman, Simon Alcok, is made from seven manuscript copies and one incunabulum,[4] as follows:

R London, British Museum Royal 8 E xii (saec. 15), ff. 53-60.
L Oxford, Lincoln College 58 (saec. 14–15), ff. 5–12.
M Oxford, Magdalen College 11 (saec. 15), ff. 183–187.
C Cambridge, Corpus Christi College 423 [II] (saec. 14-15), ff. 14–20.
S Oxford, Lincoln College 101 (saec. 15), ff. 11–13.
B Oxford, Bodleian 52 (1420–1430), ff. 102–108.
H London, British Museum Harleian 635 (saec. 15), ff. 1–5.
V Vatican, Stamp. Rossiano 718 (c. 1480), ff. 115–122.

No two manuscripts are identical throughout; the printed copy in some places differs from all the manuscripts, and is not consistently like any one of them. They may, however, be roughly grouped. Three manuscripts, SBH, are alike in the following respects:

1. They arrange the sections of the treatise in an order different from that of the other manuscripts.
2. They are not anonymous.

[4] RLSBH are described by Professor Harry Caplan in his Hand-List, Item No. 8. Father Charland, on p. 84 of his Artes Praedicandi, correctly includes M with the manuscripts of Alcok's treatise. He adds C to the list, and notes an incunabulum in Paris, Nat. Réserve 21342. I wrote at his suggestion to M. Charles de la Roncière in the Bibliothèque Nationale, and received information about Réserve D. 2134 (2), D. 2135 (2), D. 2136 (2), which are copies of an edition published in Cologne in 1476; and

3. They are, in thirty-three out of a total of forty-five sections, shortened by more or less. This shortening consists in omitting the introductory sentence or sentences, and proceeding at once with the examples. For instance, L reads in the first section, *Ad:*

> Exemplum dividendi thema per primam dictionem primi versus scilicet hanc prepositionem *ad* sicut patet, capiendo pro themate *Te salvum fecit.* A quo themate per predictam dictionem sicut dicendo. Procede: Te salvum fecit ad tui ab inferis liberationem.

SBH read:

> Te salvum fecit ad tui ab inferno liberationem.

Little value is lost in this shortening, and SBH seem to represent a good tradition. L is perhaps the earliest and most normal of the remaining manuscripts. M is in many places unique; R is in a handsome script but careless; C is late and very confused.

The incunabulum V is not satisfactory to use as the text. It is incomplete; it contains errors, as *ab aratro* for *a baratro* and *tantum* for *tui*; but it is often very close to SBH, and where these four agree on a reading I have almost always taken this reading for the text. I am not including here the *apparatus criticus* I constructed, as it is longer than the text, and would be very difficult to print. The title, in the form I have chosen, comes from the manuscript S.

John Leland [5] gives our first bit of information about Simon Alcok himself. He was an English writer, *feliciter in rebus philosophicis exercitatus*, who wrote commentaries on the Sentences of Lombard. To this, Tanner [6] adds the bulk of what can now be found out. Alcok, Master of Theology, was Master of Arts at Oxford, and held a benefice at Westylbury in the diocese of London. He is said to have flourished about 1380. A certain Simon Alcok, S.T.P., canon of Lincoln, died August 10, 1459, and was buried in Lincoln Cathedral.[7] This Simon Alcok was

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to Monsignor Auguste Pelzer, who called my attention to Stamp. Rossiano 718 in the Vatican Library; this I have used, calling it V.

[5] John Leland, Commentarii de scriptoribus Britannicis, Oxford, 1709, chap. 498.

[6] Thomas Tanner, Bishop of St. Asaph, Biblioteca Britannico-Hibernica, London, 1748, p. 24.

[7] The History and Antiquities of the Cathedral Church of the Blessed Virgin S.

appointed to the prebend of Norton in the church of Hereford August 25, 1436. Tanner adds to the list of his works our treatise, and *conciones varias*.

An article in the Dictionary of National Biography by Sir Sidney Lee makes use of these sources, but does not mention the *claruisse fertur ca.* 1380, which is not easily reconciled with the date of his death in 1459. Lee adds to the list of his works many sermons, and a Libellus de arte dictaminis, the colophon of which states that it was prepared as a lecture *a magistro Symone Alkoke, doctore in theologia, anno Domini Mcccc27.* Lee says that another work, entitled Libellus de arte scribendi epistolas, has also been ascribed to Alcok.

Alcok's treatise which appears below is not a complete *Ars Praedicandi*, but presents only one division of the art of preaching, namely expansion, or *dilatatio*. It begins with a list of forty-five words (or phrases), each of which suggests a possible means of expansion. These are strung together in eight lines of hexameter verse, not all metrically correct, as a device to aid the preacher's memory. The treatise which follows is a series of paragraphs, each dealing with one of the words in the verse, and arranged in the same order.

Alcok is independent of the traditional division into eight kinds of expansion, the division used by Richard of Thetford, Antoninus Florentinus, Robert Basevorn, and St. Bonaventure,[8] and indicated in the *initia* of Items No. 90, 98, 104–110, in Professor Caplan's Hand-List. Alcok makes no mention of the four senses of Scriptural interpretation as such. He omits the common mediaeval method of expansion by etymology. For authority, he refers only to the Bible. His examples come from Scripture, and from common experience, as in the section *Pertinet* where he names the articles that appertain to a traveler. These are such everyday things — staff, wallet, cloak, hat —

Mary at Lincoln. Collected by Robert Sanderson, 1641. Item 61 in Desiderata Curiosa by Francis Peck, London, 1779.

[8] Richard of Thetford's tract may be found in A. Lecoy de la Marche, op. cit. The eight kinds of *dilatatio* are on pages 295, 296. For Antoninus see his Summae sacrae theologiae, Pars III, Tit. xviii, chaps. 3–6 (Venice, 1582, fols. 331–337^{v}). Basevorn's tract is in Charland, op. cit., pp. 232–323. For St. Bonaventure, see his Opera Omnia (Quaracchi, 1882–1902), 9, pp. 8–21.

that he, or at least his copyists, are forced into the vernacular to express them. Only the confused manuscript C makes an attempt to use without explanation a Latin word for hat, *pilius* (for *pileum*, *pilleum*, or *pileus*). SBH omit the passage; M omits the word. But R reads *capella*, with the word *hatte* written in above. L reads *auctoritate a hat*, V reads *pelēs auctoritate anhatte*.

Alcok often writes a construction on this pattern: *Salvatio nostra est repressiva diabolice potestatis*. In so doing, and in other constructions also, he uses a number of words ending in -ivus that I do not find elsewhere listed.[9] Another new word is *situaliter* in *Locus*.

He does not put *dilatatio* in its place in the art of preaching, as does 'Henry of Hesse,' or the anonymous author of the 'Aquinas'-tract, or Basevorn, or Waleys,[10] nor can I find any precedent for his arbitrary arrangement of the parts of *dilatatio*, although certain of his paragraphs, as the ones called *Pertinet*, *Effectus*, *Locus*, *Impedit*, might be derived from one of Waleys'.[11] Yet in spite of all seeming independence Alcok is like his contemporaries, he includes in his forty-five paragraphs nearly all their means of expansion, and he shows, as they do, a faint influence of Aristotle's logical works, namely the Categories and the Topics.

[9]

durativus	infusivus	reserativus
evacuativus	iniuriativus	restrictivus
excecativus	perditivus	spoliativus
expostulativus	placativus	

These words are not to be found in Forcellini-DeVit, Totius Latinitatis Lexicon, in DuCange, Glossarium Manuale ad scriptores mediae et infimae Latinitatis, in Bulletin DuCange (through 12.2, 1938), in Baxter-Johnson, Mediaeval Latin Word-List, or in Thes. L. L. so far as it is available.

[10] For 'Henry of Hesse' see Caplan, '"Henry of Hesse" on the art of preaching,' in PMLA 48 (June, 1933), pp. 340–361. Caplan, 'A Late Mediaeval Tractate on Preaching,' in Studies in Rhetoric and Public Speaking in Honor of J. A. Winans, New York, 1925, pp. 61–90, gives a translation of the 'Aquinas'-tract. For Basevorn see above, note 8; Waleys' tract is also in Charland, op. cit., pp. 327–403.

[11] Charland, op. cit., p. 397.

TRACTATUS ALCOK DE DIVISIONE THEMATIS

Incipit tractatus de modo dividendi thema, pro materia sermonis dilatanda, editus a magistro Simone Alcok, sacre pagine professore.

Ad, quare, per, propter; notat, in, similat que gerundi,
Ad quos, ne, de quot; locus, impedit, atque processus.
Accidit, adverbium; circumstat, que, relative,
Participans, variis, ablative, genitive,
Ostendit, movet, ut; historia, cum, quia, contra.
Pertinet, effectus; conclusio, questio, stat que,
Comparat, adveniunt; argutio, littera, signa,
Adquirit, causa; postil, diffinit, et inter.

In predictis versibus continentur dictiones per quas potest fieri divisio a themate in materia sermonis. Ac etiam per easdem dictiones potest predicator multiplicare materiam et eandem dilatare in quolibet principali et in quacumque parte sermonis. Et quamvis quodcumque thema non faciliter potest dividi per quamlibet dictionem predictam, tamen raro assignatur thema quin illud possit dividi per multas vias in predictis versibus contentas, si intellectus predicantis ab altissimo dirigatur magistro qui est spiritus veritatis.

AD Exemplum dividendi thema per primam dictionem primi versus scilicet hanc dictionem sive prepositionem *ad* sic patet capiendo pro themate, *te salvum fecit.*[12] A quo themate per predictam dictionem sic dividendo procede: *Te salvum fecit* ad tui ab inferno liberationem per virtutem sacramentorum, ad viciorum evacuationem per observantiam preceptorum, ad future beatitudinis fruitionem in contubernio beatorum.

QUARE Thema dividitur per hanc dictionem *quare* ubi convenit querere questiones in themate et causas reddere ipsius questionis. Exemplum: capto themate predicto sic procede, *te salvum fecit* ut te a baratro liberaret, ut te a viciis expurgaret, ut te virtutibus decoraret, ut gloria celesti premiaret. Vel sic potes prolongare: *Te salvum fecit* ut te a baratro liberaret quod per peccatum meruisti, ut te a viciis expurgaret que tu turpiter commisisti, et sic de ceteris.

PER Exemplum dividendi per hanc dictionem *per* patet sic procedendo cum eodem themate: *Te salvum fecit* per sanguinis sui effusionem, per sacramentorum medicationem, per sue legis eruditionem, per sue gratie infusionem.

PROPTER Exemplum dividendi per hanc dictionem *propter* sic patet cum themate predicto: *Te salvum fecit* propter diaboli potestatem confundendam, propter sui dilectionem imprimendam, propter sui misericordiam ostendendam, et propter naturam hominis paradiso restaurandam.[13]

[12] Mark 10. 52.

[13] In place of the section *Propter* CM have a section as follows:

SICUT Divisio per hanc notam *sicut. Te salvum fecit,* scilicet Christus, sicut advocatus in curia pro amico suo prosequens fideliter, sicut mercator providus mercimonia sua de longinquis ad portum producens fideliter, sicut ortolanus vineam suam colit ut vinum producat largiter, sicut triumphator capta preda redit ad propria solemniter.

C adds the section *Propter* written in at the bottom of the page. See below, section *Processus*, p. 209, for the same material.

Divisio fit secundum sententiam huius dictionis *notat* quando in diversis dictionibus thematis notantur certe res materie aut constitutiones in quibus stabit materia principalium. Exemplum: in predicto themate notantur tria. Primo, notatur infirmitas fragilis et multum prona ad peccandum, ibi *te*. Secundo, notatur misericordia ineffabilis largissima ad condonandum, ibi *salvum*. Tertio, notatur potestas interminabilis potens a morte liberare, ibi *fecit*. NOTAT

Exemplum dividendi thema per hanc dictionem *in* sic patet capto predicto themate: *Te salvum fecit* in baptismi ablutione, in penitentie expiatione, in mandatorum observatione, in sui sanguinis effusione. Vel aliter potest prolongare principalia sic dicendo: *Te salvum fecit* in baptismi ablutione a macula originali, in penetentie expiatione, et cetera. IN

Exemplum dividendi predictum thema per hanc dictionem *similat*: Oportet convertere similitudines ad thema, et hec via dividendi est notabilis et introducit multas materias. Hac igitur via dividendo predictum thema, sic procede: *Te salvum fecit* sicut rex populum suum liberans a tiranni captivitate, sicut aquila pullos suos protegens sub alarum securitate, sicut mater filios suos lactans in iuvenili teneritate, sicut nauta navem suam dirigens in undarum tempestate, sicut pater filiis suis compatiens considerata eorum fragilitate. SIMILAT

Dividendo thema per *gerundiva* possunt multe materie converti faciliter ad thema. Exemplum in themate predicto: *Te salvum fecit*, ostendendo per legem et prophetas mandatorum observationem, predicando per seipsum consilia evangelii imitanda, manifestando in martiribus mundi gloriam contemnendam, humiliando se ad mortem ad nostram naturam celesti glorie reducendam. GERUNDI

Ad dividendum thema secundum sententiam denotatam per predictam dictionem *ad quos*, oportet videre si verbum principale thematis sit transitivum, et deinde ad quem vel ad quos transit actus verbi. Quo viso convertatur predictum thema ad obiecta in que transit actus verbi. Exemplum in themate predicto: *Te salvum fecit*. Quod quidem thema potest dici tribus generibus hominum, scilicet ecclesiasticis, militibus, et populo vulgari. Verbi gratia: *Te salvum fecit* ecclesiasticum, ut in vite sanctitate populum doceas predicando; militem, ut defendas ecclesiam iustitiam pauperi faciendo; vulgarem, ut labores sine dolo dei preceptis obediendo. AD QUOS

Exemplum dividendi per hanc dictionem *ne* sic patet: *Te salvum fecit* ne populus in limbo sub mundi principis maneret captivitate, ne populus in mundo careret remedio pro originali culpe evacuanda acerbitate, ne regnum celorum differretur ipsum querentibus in puri cordis sinceritate. NE

Ut thema dividatur secundum sententiam harum dictionum *de quot* vel *de quibus*, oportet considerare de quibus potest verbum thematis verificari, sive sint principalia agentia sive instrumenta vel quecumque alia consimiliter pertinentia de quibus potest verificari actus verbi. Exemplum: Capto predicto themate *te salvum fecit* sic est procedendum: Quattuor salvum faciunt hominem positum in periculo. Primo, scutum in prelio; secundo, navis in mari; tertio, gladius inter hostes; quarto, thesaurus in captivitate. Sic moraliter secundum quodlibet predictorum: *Salvum te fecit*, primo, scutum fidei salvat te contra hereticam impugnationem; secundo, navis virtutis contra viciorum inundationem; tertio, gladius verbi dei ad peccati reseca- DE QUOT

tionem; quarto, thesaurus passionis Christi salvat te ad tui ab infernale captivitate liberationem.

LOCUS Ad dividendum thema per viam localem est advertendum quod sumitur hic locus pro re materiali situaliter extensa, sicut est castrum, navis, templum, mons, arbor, gladius, porta, denarius, lucerna, thuribulum, cathedra, mensa, et sic de ceteris quorum partibus possunt applicari moraliter virtutes vel vicia, aliquando propter proprietates locales, aliquando propter naturales, et aliquando propter utrasque. Sicut in cruce, que est res localis et materialis localiter extensa, possunt notari tales proprietates locales, scilicet quod habet unam partem versus sursum, aliam versus deorsum; et unam partem versus dexteram, aliam versus sinistram, et iste proprietates locales possunt moralizari ad mores. In cruce etiam possunt notari proprietates naturales, sicut de qua materia fuit crux. Ut patet in hiis versibus:[14] Pes cedrus, medium cipressus olivaque summum, palmaque, transpositum fuit in Christi cruce lignum. Ex istis proprietatibus possunt applicari mores secundum congruentiam, sed ut plurimum in rebus localibus artificialibus sicut in scuto, navi, denario, et aliis que sunt artificalia notantur frequentius proprietates locales quam naturales. Verbi gratia, in scuto possunt notari figura triangularis, pictura, et huiusmodi que sunt localia. Possunt etiam in talibus notari ea que sunt naturalia, scilicet quod scutum sit ex auro quod est metallum ponderosum et durativum et sic de consimilibus, introducendo colores scuti et alia pertinentia. Exemplum ergo dividendi per locum sicut per modum localem patet capto themate predicto, *te salvum fecit*, sic dividendo: Lego quod in quattuor locis Christus salvavit diversos. Salvavit Petrum in mari, mulierem adulteram in templo, Mariam Magdalenam in convivio, et omnem hominem capacem redemptionis in cruce. Moraliter, per mare intelligitur mundialis tribulatio, in quo loco nota undas, flatum, malum, et cetera pertinentia. Per templum nota templum virtutis, in quo loco nota pavimentum, parietes, columnas, et cetera, et applica eis nomina virtutum. Per convivium, sacramentum eukaristie, in quo nota multas delicias, preciositatem cibi, et eius effectus, et ministros huius convivii, et sic de ceteris circumstantiis. Per crucem, penitentiam; et partibus crucis applica partes penitentie. Iste modus dividendi thema potest dici modus localis, quia tota materia sermonis ponitur in rebus localibus.

IMPEDIT Via dividendi per impedimenta aliquando convenit principio sermonis et non tantum principio sed multotiens potest multiplicari materia infra sermonem per hanc viam. Exemplum dividendi thema per impedimenta sicut patet: tria impediunt hominem ne sit particeps salvationis Christi: scilicet obstinatio indurationis, cecitas mundialis dilectionis, et ingratitudo finalis desperationis.

PROCESSUS Ad cognoscendum qualiter dividendum est thema per processum, est notandum quod processus convenit in aliquibus cum loco eo, quod aliquando est processus in materia locali super quam procedit sermo. Differt tamen processus a loco, ut hic: Sumitur quia processus non stat tantum in una re locali sed in multis rebus, procedendo ab una re ad aliam quasi cum successione, in-

[14] In cruce palma fuit, cedrus, cupressus, oliva,
Datque pedem cedrus, truncum cupressus, oliva
Dat capiti tabulam, praebat duo brachia palma.

De Sancta Cruce, Dreves, Analecta Hymnica, vol. 31, No. 80, p. 97 (saec. 15).

troducendo materiam circa quam cum instrumentis et cum modo operandi similibus ut materia exigit. Sicut ponitur pro exemplo: Rex habens circa se exercitum, reginam ornatissimam, cui prosequitur unus advocatus apponens sibi bullam scriptam in pergameno, aut tali vel tali materia, pro causa unius traditoris cui advocatus petit cartam perdonationis patenter sigillandam sigillo regis, et sic de similibus exemplis in operibus artificialibus, sicut exemplificando de mercatore, messore, seminatore, agricola, et de huiusmodi que possunt introduci pro materiis in quibus stabit sermo. Exemplum dividendi thema preassumptum per hanc viam sic potest patere, *te salvum fecit*. Christus enim salvavit hominem sicut advocatus in curia pro amico suo prosequens fideliter, sicut mercator providus mercimonia sua de longinquo ad portum producens feliciter, sicut ortolanus vineam suam colit ut vinum producat largiter, et sicut triumphator capta preda redit ad propria solemniter.

ACCIDIT

Thema etiam potest dividi per accidentia vel per proprietates accidentales alicuius quod ponitur in themate. Exemplum dividendi thema predictum: *Te salvum fecit*. Considerandum est quod salvatio nostra facta per Christi passionem est, primo, repressiva diabolice potestatis; secundo, est spiritualiter sanativa nostre infirmitatis; tertio, est fugativa mundialis vanitatis; quarto, evacuativa corporalis voluptatis; et quinto, recuperativa celestis hereditatis. Et hec predicta divisio facta est per nomina adjectiva accidentalia sicut *repressiva*, *sanativa*, et cetera. Potest etiam divisio fieri in accidentia per nomina substantiva accidentalia, sicut sunt *magister*, *rex*, *medicus*, et huiusmodi. Exemplum dividendi hoc thema: *Spiritus sanctus docebit vos*.[15] Potest hic notari quod spiritus sanctus est magister, dux, consolator, et medicus. Aliud exemplum potest patere dividendo accidentaliter transsumptive, sicut: beata virgo potest dici speculum, nubes, flos, et turris, et hec divisio convenit cum divisione capta a similitudine ut prius patet.

ADVERBIUM

Potest etiam dividi thema per adverbia significantia circumstantias accidentales. Exemplum in predicto themate: Christus enim salvos nos fecit, potenter in cruce draconem superando; largiter pro nostra salute suum sanguinem effundendo; misericorditer pro labentibus, remedia penitentie statuendo; et eternaliter in caritate, perseverantibus regnum celorum concedendo.

CIRCUMSTA

Ad dividendum thema vel ad dilatandum aliquam partem sermonis per circumstantias, oportet notare que circumstant materiam dividendam et illa debita colligere. Exemplum: Ad dividendum thema predictum per circumstantias patet sic procedendo. In salvatione facta per passionem Christi fuerunt hec concurrentia: flagella, baiulatio crucis, gustus aceti, lancea, clavi. Sic nos, si voluerimus salvari in passione Christi, oportet tolerare flagella mundialis persecutionis, baiulare crucem penitentie, gustare sepe acerbam memoriam mortis, sepe pungi in mente lancea futuri iudicii, et ligari cruci penitentie per clavos perseverationis. Secundum tamen ad procedendum a themate per circumstantias alicuius dictionis in themate, facilius potest sumi exemplum in alio themate quam predicto. Sicut in capiendo hoc pro themate: *Videte*.[16] In quo potest notari quod qui debet videre, debet aperire oculos, et quod oculi non sint infirmi. Requiritur etiam quod sit lumen circumstans, et quod non sit obstaculum inter ipsum et visibile. Similiter quis debet videre,

[15] Luke 12. 12.

[16] 1 Cor. 1. 26, 8. 9, 10. 18, and elsewhere.

quid videbitur, ubi, quomodo, quando, et sic de similibus et moraliza pro ut deus dederit. Similiter homo potest videre supra se celum, sub se infernum, ante se mortem futuram, post se peccata que commisit, infra se conscientiam remordentem, contra se vanitatem mundi, et sic de similibus. Item potest via dividendi thema per circumstantias patere, capto themate *Venite*.[17] Hic possunt notari qui debent venire, ad quem, a quo termino, et ad quem terminum, per quam viam, pro quo tempore, et si sint insidie; quod veniat armatus, et cum quibus armis, et sic de similibus circumstantiis pertinentibus. Et convenit iste modus cum processu prius dicto in dictione *processus*.

QUE Ad habendam viam divisionis que concipitur per sententiam istius dictionis *que* posita in predictis versibus, oportet considerare quod hac via contingit dividere quando verbum thematis est verbum dupplicis transitionis, ut, capto hoc themate *Evangelizo vobis*,[18] patet quod sunt duo actus in hoc verbo *evangelizo*, quia hic convenit querere primo cui evangelizo, secundo quid vel que evangelizo, quo ad primum patet in themate *quia*. Vobis sed ulterius convenit exprimere que sunt illa que evangelizo vobis. Et super hanc secundam partem stat divisio per hanc viam cuius exemplum potest patere in hoc themate, sic procedendo: *Evangelizo vobis* primo, omnipotentiam dei in nostra creatione; secundo, eius amorem in nostra redemptione; tertio, eius misericordiam in sacramentorum contra peccata ordinatione; quarto, eius iustitiam in finali examinatione; et quinto, eius retributionem pro sue legis observatione.

RELATIVE Thema etiam potest dividi et continuari ad diversas materias per relationem cuius exemplum potest patere in divisione dicti thematis: *Te salvum fecit*. Christus *te salvum fecit* quem liberavit a peccato originali per baptismum, quem curavit a peccato actuali per penitentie sacramentum, et quem per mandatorum observationem celeste ordinavit ad regnum.

PARTICIPANS Item thema potest dividi continuando diversas materias thematis per participium. Exemplum: *Te salvum fecit*, revocans te a carnali voluptate per sue legis meditationem; trahens te a mundiali cupiditate per tue mortis impressionem; prohibens cordis presumptionem per humilitatis considerationem; et docens accidie proicere torporem per devotam contemplationem.

VARIUS Potest thema etiam dividi distinguendo aliquem terminum in themate in modos multiplices. Exemplum in themate predicto: *Te salvum fecit*. Potest considerari per sententiam scripturarum multiplex salvatio, scilicet salvatio reparationis, ereptionis, sanationis, reconsiliationis, et confirmationis. Et iste modus aliquando coincidit cum divisione per accidentia.

ABLATIVE Thema etiam dividitur in diversas materias per casum ablativum, et huic vie possunt secundum convenientiam materie deservire quasi omnes prepositiones casus ablativi. Exemplum cuius sic ponitur in hoc themate: *Te salvum fecit*. Salvatur enim homo in fide vera credendorum, in observatione preceptorum, in imitatione consiliorum, in meditatione supernorum. Vel sic: Salvatur homo in nativitate per baptismum contra peccatum originale, in media vita per penitentiam contra peccatum actuale, et in morte per viaticum eukaristie contra supplicium infernale. Vel sic: Salvatur homo a carnali concupiscentia, Christi passionem meditando; a mundi confidentia per sue mortis recordationem; et a diaboli temptatione per devotam orationem. Vel sic localiter vel in processu: Salvatur homo in bello per armorum tuitionem, in mari per solide navis subventionem, et in tenebris per lucerne illustrationem.

[17] Matt. 11. 28. [18] Luke 2. 10.

Exemplum dividendi thema per casus genitivos potest sic patere in hoc themate: *Te salvum fecit.* Aliqua est salvatio voluptatis repressiva, et hoc est per abstinentiam; aliqua cupiditatis evacuativa, et hoc est per mortis memoriam; aliqua superbie restrictiva, et hoc est per proprie fragilitatis notitiam; et aliqua est desperationis expulsiva, et hoc est per constantiam. GENITIVE

Potest etiam thema dividi per media ostendentia ipsum thema vel aliquam conclusionem a themate elicitam. Exemplum huius divisionis in themate predicto sic potest patere: Palam est enim quod Christus *te salvum fecit* in propria persona et super crucem suum sanguinem effundendo. Et modus cuiuslibet istorum potest ostendi dupliciter vel tripliciter, scilicet ratione, auctoritate, exemplo, natura, arte, et figura. Aliud exemplum eiusdem divisionis sic potest sumi: Tria ostendunt hominem esse participem salvationis Christi. Primum est fidei firmitas, secundum est spei integritas, tertium est perseverans caritas. OSTENDIT

Potest etiam thema dividi per media moventia vel inducentia ad faciendum, agendum, consequendum, aut in casu ad vitandum aliquid importatum in themate vel aliquid quod potest elici ex themate, exemplum cuius de themate predicto *te salvum fecit* sic potest sumi: Tria moverunt hominem ad regratiandum deo de salvatione sua, scilicet antique legis alleviatio, sui sanguinis effusio; inferni spoliatio, sacramentorum institutio; et janue celestis apertio. MOVET

Exemplum dividendi thema per hunc terminum *ut*, qui aliquando denotat circumstantiam alicuius effectus, sic potest patere in predicto themate: *Te salvum fecit.* Salvavit deus hominem ut serpentis antiqui potestatem conculcaret, ut hominem ad dei cultum ferventius incitaret, ut sui misericordiam erga homines apertius insinuaret, et ut hominem hereditati perdite gratiose restauraret. UT

Ad dividendum thema ponendo totam materiam sermonis in certis historiis exponendis, sicut applicando cuilibet principali unam principalem historiam in cuius expositione et dilatatione stet tota materia principalis, multum iuvat scire convenienter inducere tales historias. Pro quo potest notari quod una via inducendi historiam convenienter fit per conclusionem generalem concernentem materiam totius historie aut aliquid notabile in historia, aut aliter intentum finale ipsius historie. Qua conclusione presupposita, debet talis historia induci ad probandam vel ad confirmandam istam conclusionem. Exemplum dividendi thema preassumptum sic: *Te salvum fecit.* De triplici salvatione invenio, primo, qualiter prelatus salvat gregem suum in continuatione orationis et assiduitate predicationis; secundo, quod dux bonus salvat gentem suam in subditorum defensione et iustitie executione; et tertio, quod homo ab hoste salvat seipsum in periculorum prudenti circumspectione. Iam iste tres conclusiones predicte possunt probari per tres historias in quarum expositione et dilatatione potest stare materia sermonis. Figura primi habetur in Exodo de Moyse qui per doctrinam legis dei et devotam orationem salvavit populum Israel in deserto. Nota historiam et applica facta Moysi ad prelatos, sicut quod fuit eruditus in lege dei, vir mansuetus orans pro peccato populi in monte, sed tamen severe puniens populum quem vidit publice peccare, semper obiurgans contra peccatum populi, constituens sub se iudices sapientes qui non debent vendere peccata, sed punire. Et sic possunt notari in hac historia illa que conveniunt et moralizari ad prelatos, intermiscendo auctoritates HISTORIA

doctorum et scripture ad propositum pertinentes. Dixi secundo quod alia est salvatio et cetera. Figura huius habetur Josue ubi legitur quod nobilis ille dux Josue pugnavit pro populo dei et divisit illis hereditatem et cetera. Nota historiam et moraliza ad potentes seculi, qualiter ipsi debent pugnare pro populo, et dividere illis, et non rapere ab eis; et similiter Josue habuit magnam memoriam ut archa dei tractaretur honeste, et voluit sacerdotes semper in bello clangere tubis. Sic milites haberent magnam memoriam de timore ecclesie et multum confiderent in orationibus sacerdotum. Dixi tertio et cetera in cuius figura legitur quod David circumspecte se habuit quando persequebatur a Saule. Nota historiam. David iustum, Saul diabolum signat. Nota lanceam Saul et cetera arma quibus voluit interficere David, et introduc cetera notanda et moraliza ut Jesus dat pro tempore. Per ista exempla patet qualiter historie convenienter introducuntur quando proponuntur conclusiones concernentes materiam historiarum enarrandarum. Aliquando autem conclusiones presupponende ad historias introducendas convenienter connectunt ipsas historias ad materiam thematis per similitudinem vel comparationem ad aliquid notabile in historia introducenda. Exemplum cuius habetur prius in hoc verbo *similant*. Exemplum tamen potest sic poni sumpto themate priori: *Salvum te fecit*. Invenitur in Apocalypsi de homine equitante super equum, in Zacharia de curru, in Evangelio de navi. Si vis historias istas pro materia sermonis introducere ad predictum thema, sic procede: *Salvum te fecit* sicut princeps in curru sedens, exercitum ad prelium incitando; sicut miles super equum residens, ad singulare certamen properando; et sicut nauta in mari ad navim per rethe, pisces congregando. Per currum, evangelium. Rote currus, quattuor evangeliste. Equi trahentes, quattuor doctores vel scire liberales. In secundo membro miles, Christus; equus, universitas virtutum, sicut applicando: Quattuor pedibus equi, quattuor virtutes cardinales et ceteras virtutes, ceteris membris. Certamen erat victoria in cruce. In tertio, nauta, Christus; navis, fides ecclesie; rethe, predicatio; et pisces, populus; mare, mundus. Et sicut fit introductio ad historiam proponendo conclusionem cum nota similitudinis. Ita potest fieri per notam prepositionis sicut *in*, *per*, *ad*, *super*, et huiusmodi, sicut in hoc themate patet: *Ascendit Christus in montem*,[19] in navim, in civitatem, in templum, et sic de similibus. Sed quasi pro maiore parte videtur, observandum quod quando aliqua historia prolixa vel brevis, vel aliqua auctoritas scripture est introducenda in predicatione, debet aliqua oratio vel conclusio precedere que confirmanda, ostendenda, vel probanda est per talem historiam vel auctoritatem sequentem. Sed ut hoc fiat facilius, expedit predicatori antequam compilet sermonem congregare historias et auctoritates pertinentes ad materias quas proponit tractare, quibus auctoritatibus habitis, studeat elicere conclusiones ex eis que possunt probari per ipsas auctoritates. Et cum opus fuerit tales auctoritates tractare, presupponat conclusiones ipsis auctoritatibus convenientes, et probet ipsas conclusiones per auctoritates a quibus ille conclusiones elicite fuerant. Exemplum: Si quis in una parte sermonis voluerit reprobare superbiam per certas auctoritates quas de superbia invenit in scripture, videat primo que possunt elici per illas auctoritates. Forte ex una elicitur quod superbia est deo iniuriativa; ex alia, quod est rationis excecativa; ex tertia, quod est erga

[19] Mark 5. 1.

proximum mali exempli inductiva; ex quarta etiam, quod est vindicte expostulativa; ex quinta auctoritate, quod est demonibus placativa; ex sexta, quod est ad Gehennam productiva; ex septima, quod est gratie perditiva. Iam ad tractandum auctoritates predictis conclusionibus convenientes, melius introducuntur postquam conclusiones proponuntur, ut enarratio quid est superbia diffinitive si quis voluerit, et iuxta hoc, qui sunt superbi; si predicator voluerit in isto stare, ut ulterius inducantur homines ad vitandum superbiam, potest procedi ac si diceretur: Istud maledictum peccatum superbie deberent omnes homines abhorrere propter septem malas condiciones seu proprietates que inveniuntur in ea. Prima enim eius condicio est quod sit deo iniuriativa, unde in Psalmo: *Superbia eorum qui te oderunt ascendit semper.*[20] Secundo, sic procede de ceteris, proponendo conclusiones et probando eas per auctoritates ex quibus iste conclusiones elicite erant. Non tamen semper in una materia oportet multiplicare tot conclusiones probandas per historias vel auctoritates sequentes, sed aliquando plures, aliquando pauciores, secundum quod quis voluerit stare prolixius vel brevius in una materia. Et aliquando una conclusio proposita probatur et confirmatur per multas auctoritates sequentes, aliquando per longam historiam et ideo in istis oportet temperare modum secundum quod dominus dat intellectum predicatori. Patet ergo ex predictis quod quando thema dividitur in conclusiones qualescumque vel in principalia quorum fundationes convenienter stant in historiis, tunc ipse historie pertinenter inducuntur.

CUM

Potest etiam predictum thema dividi in diversas materias per prepositiones. Exemplum dividendi cum hac prepositione *cum*: Christus enim salvos nos fecit cum motu sue pietatis, carnem de virgine assumendo; cum pena sue humanitatis, nos in cruce redimendo; cum potentia deitatis, inferni claustra spoliando; cum titulo equitatis, captivos ad gloriam reducendo; et cum stola immortalitatis, cives in gaudio premiando. Et potest notari quod ista prepositio *cum* et consimiles convenienter connectunt verbum thematis ad circumstantias sibi convenientes. Exemplum huius potest haberi sumpto hoc themate *Pugnate*,[21] sic dividendo: Pugnate cum scuto fidei contra hereticam pravitatem, cum gladio verbi dei contra viciorum enormitatem, cum iaculis devote orationis contra serpentis antiqui calliditatem, cum lorica iustitie et equitatis contra mundi cupiditatem. Aliud exemplum dividendi thema negative per prepositiones sic patet: Homo enim qui peccavit non salvatur sine vel absque fide credendorum, sine effectu sacramentorum, sine detestatione peccatorum, et sine custodia mandatorum.

QUIA

Potest etiam thema dividi per notam causalem, cuiusmodi est terminus *quia* vel *quoniam* cuius exemplum patet accepto hoc themate: *Caute ambuletis*.[22] Quia tempus misericordie preterit si non accipitur hic perfecte vivendo; quia adversarius semper vigilat ut vos precipitet in temptando; quia mundus allicit ad vanitatem, hominem in prosperis obcecando; et quia caro declinat ad voluptatem, futurum iudicium negligendo.

CONTRA

Dividi etiam potest thema per ea que contrariantur alicui quod importatur in themate. Exemplum huius divisionis in predicto themate *te salvum fecit* sic patet: Quattuor genera hominum contrariantur amori Christi quem nobis

[20] Ps. 73. 23.

[21] Joshua 1. 14, I Macc. 5. 32, 2 Esdras 4. 14, 2 Kings 10. 3.

[22] Eph. 5. 15.

ostendit in salvatione nostra. Primo, superbi contrariantur Christo qui salvavit nos se ad mortem humiliando; secundo, invidi contrariantur Christo qui salvavit nos pro crucifigentibus obsecrando; tertio, gloriantes in voluptate carnis contrariantur Christo qui carnis lacerationem pertulit flagellando; et quarto, accidiosi contrariantur Christo qui sudorem sanguineum effudit, suam passionem acerbissimam meditando. Aliud exemplum dividendi per contrarietatem potest patere, sumpto eodem themate, sic: Reperio in scripture quod quattuor salvant hominem contra anime sue pericula. Humilitas salvat hominem contra superbie vanitatem, abstinentia salvat hominem contra carnalem voluptatem, largitas elemosine salvat hominem contra mundi cupiditatem, et fidelis spes salvat hominem contra desperationis acerbitatem.

PERTINET Item potest thema dividi per conditiones pertinentes ad materiam thematis, vel alicuius effectus sequentis ex materia thematis. Exemplum, capiendo hoc thema *Peregrinus es*.[23] Potest talis divisio fieri in materia sermonis: Ad peregrinum pertinet baculus, pera, tabardum, et pilius; ut sciat linguagium, caute gerere monetam suam, die lucente providere de hospitio, et sic de similibus que possunt applicari ad mores peregrinantis spiritualiter versus supernam Ierusalem. Exemplum etiam potest sumi procedendo a predicto themate, *te salvum fecit*, hoc modo: Pro processu huius sermonis est notandum quod tria pertinent homini qui vult esse particeps salvationis Christi. Primum est fidei stabilitas in articulis credendis. Secundum est pura voluntas in observatione mandatorum, et tertium est confessio pro expiatione peccatorum.

EFFECTUS Dividi etiam potest thema per enumerationem effectuum materie importate in themate, sive effectus illi sint boni sive mali secundum ipsius thematis varietatem. Exemplum in predicto themate sic patet: Tres nobiles effectus, tria commoda, tria proficua, tres conditiones, vel tria mirabilia opera, vel sic de huiusmodi, inveniuntur in salvatione nostra facta per passionem Christi. Primo, quod passio Christi fuit originalis culpe mundativa, secundo quod fuit cerimoniarum terminativa, tertio quod fuit infernorum spoliativa, quarto quod fuit ianue celestis reserativa. Et ex opposito ubi materia thematis facit mentionem vicii potest fieri divisio enumerando effectus vicii seu viciorum.

CONCLUSIO Dividi etiam potest thema in conclusiones certas que eliciuntur ex themate in quarum probatione stat materia sermonis. Exemplum: Ex predicto themate *te salvum fecit*, accipio tres conclusiones. Prima est quod salvatio nostra per Christi incarnationem fuit angelis gaudiosa pro lapsus nostri restauratione. Secunda, quod fuit homini fructuosa pro sue hereditatis recuperatione. Tertia, quod fuit Christo dolorosa in sui sanguinis effusione; quarta, quod fuit diabolo luctuosa in infernorum spoliatione.

QUESTIO Dividi etiam potest thema in principalia per questiones. Ut circa thema predictum potest queri, primo, quare tam longe fuerat salvatio hominis protelata; secundo, quare, cum Christus potuit aliter hominem salvasse, voluit pro illo mori; tertio, quare deus noluit hoc facere per angelum vel per aliam creaturam; quarto, utrum in salvatione nostra sanguinem suum effudit pro omnibus, et sic de consimilibus questionibus pertinentibus materie thematis assumpti, sicut querendo ubi passus est Christus pro salvatione nostra, a quibus, coram quibus, et quid recuperavit homo salvatus per passionem Christi, et sic de similibis.

STAT Per hoc verbum *stat* vel per verbum similis sententie ad presens propositum

[23] 2 Sam. 15. 19.

potest thema dividi hoc modo: Salvatio nostra stat in tribus, scilicet in fidei veritate, in spei stabilitate, in caritatis puritate, vel sic: in dei dilectione et pauperum compassione, in fraterna correctione, in boni exempli ostentatione, in penitentie frequentatione, et ad istum modum dividendi valent multa verba consimilis sententie ad istum finem, sicut: disponere, constituere, ponere, ut sic dicendo: deus posuit, disposuit, constituit, et ordinavit remedia salvationis nostre in tot et cetera.

COMPARAT

Dividi potest thema per comparationem, sic: Christus salvavit nos sicut pellicanus pullos suos proprio sanguine vivificando; sicut dux nobilis pro liberatione populi se ad mortem exponendo; sicut pontifex devotus pro plebe sua sacrificium immolando, et sicut pastor providus oves suas a lupi faucibus liberando. Vel sic: Ex gratitudine quam Christus nobis ostendit in salvatione percipere possumus quod Christus plus dilexit nos quam vir uxorem, plus quam mater filium, et plus quam aliquis suam vitam, et ulterius procede in istis pro materia sermonis.

ADVENIUNT

Per hoc verbum *adveniunt* vel per verbum consimilis sententie potest thema dividi per enarrationem effectuum qui includuntur in materia thematis. Exemplum in predicto themate: Tres magni honores adveniunt humane nature per salvationem suam in passione Christi incarnati. Primum quod humana natura unitur deitate, secundum quod homo coniungitur angelorum fraternitati, et tertium quod homo restituitur celesti hereditati.

ARGUTIO

Thema potest dividi per argumentum et hoc est quando sermo fit ex tribus principalibus quorum primum et secundum sunt premisse ad inferendum tertium principale, sicut antecedens infert consequens.

LITTERA

Dividi etiam potest thema in principalia per litteras, ut quando materia sermonis notatur in certis materiis que notari possunt in litteris alicuius dictionis in themate. Exemplum: Sumatur ista dictio *mors* pro themate, tunc sic procede. In ista dictione sunt quattuor littere; in quibus possunt notari quattuor, quorum tria mortem spiritualem, et quartum mortem carnalem, inducunt. Primum in hac littera M, mundi vanitas si diligatur. Secundum in O, opus carnis si non regatur. Tertium in R, rugiens leo si non caveatur. Quartum in S, solutio carnis que non vitatur. Aliud exemplum potest patere sumpto hoc nomine *Iesus* pro themate. Processus sermonis potest notari in tribus litteris quibus scribitur predicta dictio *Iesus*, scilicet IHC. Qui vult habere secum Iesum, oportet ut habere tria que possunt notari in predictis tribus litteris. Primo unitatem fidei in credendo que notatur in I que scribitur unico tractu. Secundo caritatem duplicem, scilicet deum et proximum diligendo, que notatur in H que fit ex duobus tractibus quorum unus est versus sursum et alius versus deorsum, et cetera.[24]

[24] H, which uses for the last of the three letters in abbreviation of the name Jesus the form S not C, completes the section as follows:

Tertio spem, que notatur per S et cetera. Nec immerito sit huiusmodi divisio per notationem litterarum; quoniam ait salvator, unum iota aut unus apex non preteribit a lege donec omnia fiant.

M demands four things, the last two of which are:

Tertio memoriam mortis et iudicii quod notatur per C habens tractum existens tibi et alium a te transequentem respiciens versus dexterum, idest iudicium et cetera. Quarto titulum supra sinistra et signat beatitudinis future ibi eternaliter regnaturus.

SIGNA Divisio etiam potest fieri per signa sic: Per decem signa estimare possumus quod aliquis est particeps salvationis Christi. Primum est vere fidei possessio, secundum peccati detestatio, tertium penitentie frequentatio, quartum verbi dei delectatio, quintum per caritatem operatio, sextum carnis maceratio, septimum fraterna correctio, octavum pauperum compassio, novum mentis in deum elevatio, decimum tribulationis paciens tolleratio.

ADQUIRIT Divisio facienda per hoc verbum *adquiro* vel aliud consimilis significationis patet equivalenter prius in dictione *adveniunt* et in dictione *effectus* cuius etiam exemplum potest sic poni: Tria adquirit homo per salvationem suam in passione Christi. Primo, cartam evacuativam culpe originalis in fonte baptismali; secundo, medicinam curativam culpe actualis in piscina penitentiali; tertio, electuarium infusivum gratie spiritualis in eukaristie sumptione sacramentali; et quarto, stolam vite immortalis per dei dulcissimam fruitionem in gloria eternali. Istud enim exemplum fit per modum localem et posset facilius aliquando fieri sine loco. Multe etiam alie dictiones sunt consimiles in sententia pro isto proposito ad istam dictionem *adquiro* ut sic dicendo: aliquis adquirit, optinet, lucratur, invenit, vel possidet tot commoda per salvationem suam et cetera. Vel sic: deus dat, confert, largitur, vel concedit homini tot bona in salvatione sua, et sic de similibus.

CAUSA Divisio etiam per causas patet prius in dictione *quia* et in dictione *propter*. Sed est notandum quod cause convenientes inducuntur ad aliquam conclusionem probandam, que conclusio debet presupponi, ut per causas concludatur. Exemplum, procedendo a themate predicto: Homo debet ex toto corde diligere deum, qui salvavit eum propter quattuor causas. Prima est quia deus homini rationalem animam ad sui ymaginem inspiravit; secunda, quia humano dominio tot et tanta animantia subiugavit; tertia, quia hominem non minori pretio quam suo sanguine comparavit; et quarta, quia hominem in preceptis suis ambulantem eterne glorie titulo certissimo predotavit.

POSTILLAT Predicare postillando est quando totus processus sermonis stat in expositione evangelii vel epistole vel alterius historie ubi fundatur thema.

DIFFINIT Predicare diffiniendo est assumere diffinitionem alicuius dictionis in themate et in eius partibus dilatandis principaliter immorari.

INTERPRETATIO Thema etiam potest dividi per interpretationem nominum. Exemplum patet procedendo a themate predicto, *te salvum fecit*. Legitur in scriptura sancta quod deus salvavit Jacob de manu Esau, Susannam false condempnatam per duos seniores, David contra persecutionem Saulis, Mariam Magdalenam a septem demoniis, et Petrum in mari. Jacob interpretatur luctator, Susanna lilium, David fortis, Maria amarum mare. Petrus interpretatur agnoscens. Iam ad propositum: Si vis salvari, oportet quod sis moraliter Jacob luctando contra vicia et mundi dolosam cupiditatem; secundo, Susanna habens lilium castitatis contra carnalem voluptatem; tertio, David fortiter pugnando contra diabolum per orationis assiduitatem; quarto, Maria amare dolendo ad viciorum purgandam feditatem; quinto, Petrus agnoscens quod in operibus fidei perseverantes eternam recipient felicitatem. Amen.

ARETALOGIA OR TERATOLOGIA?

I AM much inclined to agree with Professor Campbell Bonner [1] that ῥητολογίας in Tatian, adu. Graec. 40, is a ghost-word, and think his emendation, ἀρεταλογίας, a plausible one. It may, however, be worth pointing out that there is another possibility, τερατολογίας, which I wrote years ago on the margin of my Benedictine Tatian. The sense does not differ very much, since an ἀρετή of a god is much the same as a τέρας, both being something outside the ordinary ways of Nature, and both words can have a contemptuous tone, such as is required for the context. Palaeographically, I suggest that a misdivision by a copyist, or a misunderstanding by a reader, might have resulted in a meaningless τε, after which the Doric-looking α would almost inevitably be altered to η.

H. J. ROSE

UNIVERSITY OF ST. ANDREWS

[1] H. T. R., xxxiii (1940), p. 317.